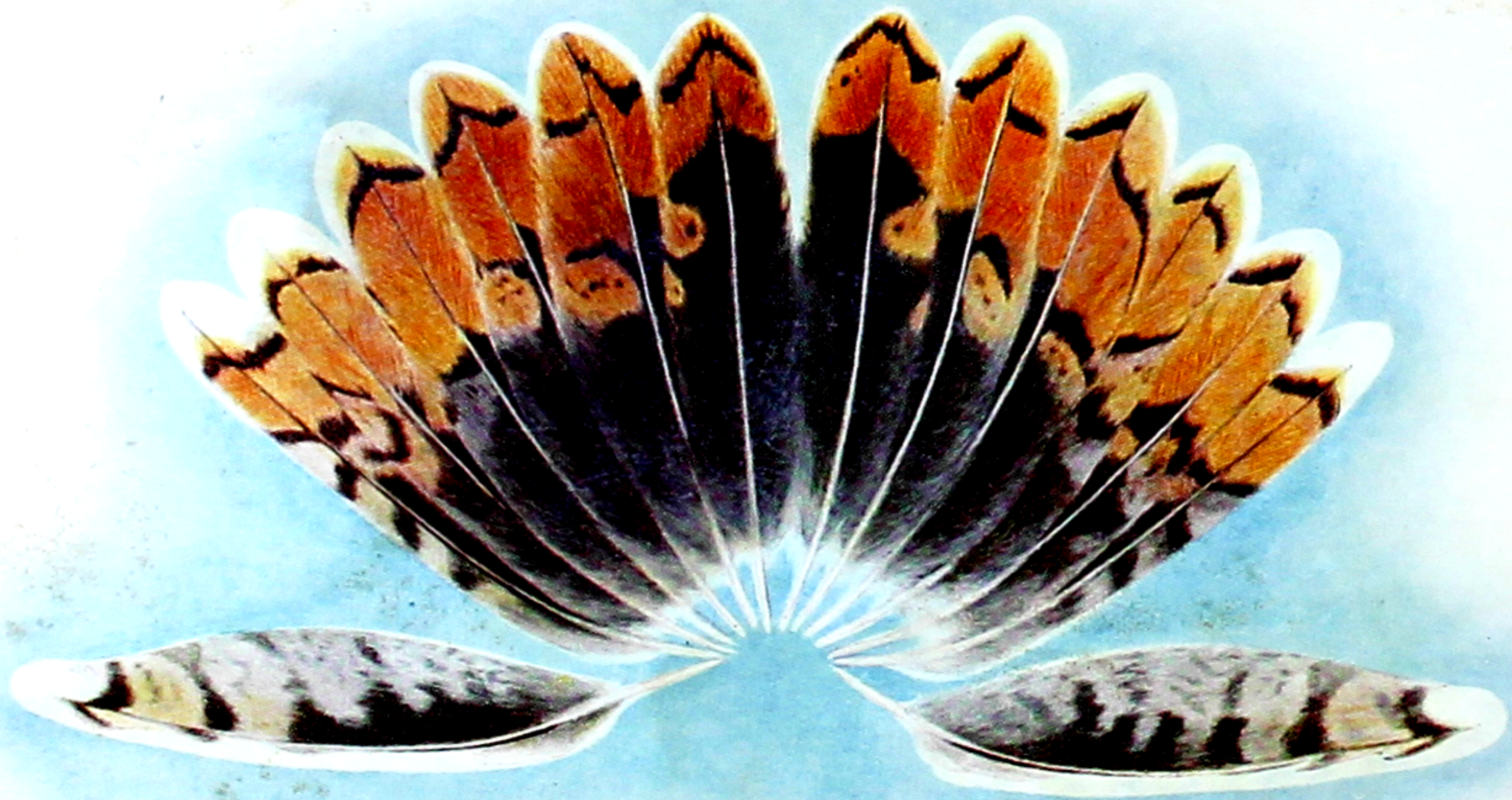
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ELEMENTS OF SHOOTING



Snipe's tail, showing position of feathers when the bird is drumming.

ELEMENTS
OF
SHOOTING

By Eric Parker
Editor-in-Chief of "THE FIELD"

With Ten Colour Plates by the Author
and various Diagrams

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Preface

THE purpose of this book is explained by its title. It is elementary; it is a book for beginners. My object has been to set down in plain language the main facts as regards shooting which a man learns in days spent on moor and field and hill; to give simple advice—or perhaps rather to offer an opinion founded on experience—as to clothes, kit and gear; to sum up the obvious and imperative rules of safe handling of a gun; to describe some of the methods and the practical work of this or that day's shooting; to look into some of the unwritten laws of the game, what to do and what not to do; and, throughout, to write of the sport of shooting from the naturalist's point of view rather than that of the mere man with a gun.

For the actual use of a gun cannot be learnt from a book; that belongs to the shooting school and practice in the field. But the natural history of birds and beasts must be a matter of personally recorded observation; and so I have tried to write about partridges and grouse and the rest as a man might talk to a boy when taking him out shooting and telling him what he himself has seen of their habits. And it is with that object that I have added a number of illustrations in colour. When a boy goes out for the first time in September he wants to know how to tell a cock from a hen partridge; when he comes to his first Twelfth of August he wants to be able to distinguish an old grouse from a young one; and he will like, too, to recognise the different foods of

grouse, growing on the moor at his feet. He wants to know how to pick out a woodcock's pin-feather, and for that matter a snipe's; he will be interested in being shown or in finding the eggs of the different game birds, and to see, close at hand as well as through field-glasses, the set of the tail feathers of a drumming snipe. So I have drawn some of these, in the hope that in this book he may be able to read the kind of talk that he would hear from an older shooting companion, and to look, on the printed page, at the plumage and the species of birds and plants as he would see them if he handled them in the field.

ERIC PARKER

HAMBLEDON, SURREY

ELEMENTS OF SHOOTING

By the Same Author:

Shooting Days

Hawker on Shooting

An Angler's Garland

In Wind and Wild

A Book of the Zoo

Highways and Byways in Surrey

A West Surrey Sketchbook

Eton in the 'Eighties

Floreat: An Eton Anthology

The Sinner and the Problem

Promise of Arden

Playing Fields

ELEMENTS OF SHOOTING

CHAPTER I

LEARNING TO HIT

IT is not fair to go out shooting until you have learned how to hit.

An altered and more humane opinion on this point is the real difference between old and new ideas as to teaching a beginner. Only thirty or forty years ago, as you may see by looking at books of the period, boys were taught shooting by practice at living creatures. They began with light charges aimed at small birds; they were allowed to shoot at pigeons let out of traps, and they were then taken to try their skill at partridges. Naturally they did not at first succeed very well, and they inflicted unnecessary pain on many wretched birds while they were learning to do better.

To-day we have changed much of that. In the first place almost every boy of twelve has learned how to handle a gun by being shown how to use a rifle. His education in shooting has begun on the miniature rifle range of his preparatory school. If in the holidays he is allowed a small-bore gun—say a single-barrelled .410—to shoot at sparrows with, he will probably carry it safely and use it

accurately. As for pigeons, it is now illegal to shoot them from traps, but for years past no one worth the name of sportsman has thought of pigeon-shooting of that kind except with disgust. And, thirdly, we now have the shooting school. There is no longer any need for any boy to go out shooting partridges or grouse, or for that matter rabbits, until he has learned, at all events, how to shoot as well as he can with a gun that fits him. At the shooting school he can practise every kind of shot which is likely to come his way—the partridge getting up and going straight away; the driven bird suddenly topping the hedge, the grouse skimming low towards the butt, the pheasant sailing out over the oaks, or even the rabbit bolting down the furrow—without doing more damage than smashing so many clay saucers. And when he goes out into the field for the first time for the real thing, he may possibly be excited and miss when the covey gets up, but with so much practice at the same kind of shot in his memory, he is quite as likely to hit, and if he hits he will probably kill mercifully, and not merely wound.

We will begin, then, at the shooting school, and pass, as quickly as may be, over the preliminary details of ordering the gun. All that has to be done in buying a gun is to select the maker, decide on your size or bore, choose your price, and provide the money; it is then the turn of the gun-maker to see that the gun fits. As to the maker, there are half-a-dozen firms or more who will make you a first-class weapon; and for

price, you can pay to-day for a pair of best guns, anything up to two hundred and fifty guineas. But it is not much use in a book of this kind to write definitely about prices. Before the war a pair of best guns cost a hundred and fifty guineas. Since the war prices have gone up, but several firms have been competing to put on the market a gun that is cheap as well as good. Such a weapon could only be possible, of course, as the result of production in large quantities, and such production could not be a simple matter. But more than one firm has succeeded ; for instance, I think that for good material and good workmanship you will find nothing to beat the Webley gun—at its price. But there again—at what price ? As I write the price of a Webley twelve-bore ejector is £24, and the price of the B.S.A. gun non-ejector is eleven guineas. But it is possible that these prices may alter.

Choice as to bore is a more difficult matter. If expense is no object, the ideal thing no doubt is for a boy to have a gun that always fits him—a .410 or collector's gun to begin with, a twenty-bore or sixteen-bore when he is fourteen or fifteen, and a twelve-bore later, when he has come to his full growth or pretty near it. But there are disadvantages, too, with light guns, even though for a boy of fourteen or so they may fit better and are lighter to carry. A light gun kicks when it carries a charge that will kill game at ordinary distances, and I have seen a boy who would naturally be a good shot put off his shooting by the knowledge that whenever he pulled

the trigger his gun would hit him. There is no final word on this question of choice of bore, for some boys almost as soon as they can shoot at all come to a size when they can manage a twelve-bore, and others develop later. But if a boy shoots with a light gun I think he should have cartridges with a light charge, and that means he cannot take long shots. It is a compromise ; but then everything to do with a light gun is a compromise. It has its advantages if it teaches a boy only to take birds which are within fair range, for shooting at birds which are too far off is one of the first things in the field which he has to learn to avoid.

And now for the actual fitting of the gun.

The first and most important question is whether your right or left eye is the master. This is easily discovered. The gunmaker puts into your hands a "try-gun," that is, a specially constructed weapon of which the stock is movable and can be adjusted with screws—and stations you before a white target on the surface of which is a movable black mark attached to a pulley and string. Bring up the gun naturally and quickly on the mark with both eyes open. Now shut the left eye. If the muzzle of the gun remains still on the mark your right eye is the master, and your fitting will probably be simple. If, on the other hand, when you close the left eye you see the barrels from the side, with the muzzle pointing to the left of the mark, then your left eye is the master, and your fitting will not be so easy a matter. We will come to that point in a moment,

but for the present we will suppose that, your right eye being the master, you go on to the next test. This is whether, when you bring up the gun, it throws the muzzle high or low or to the left or right. You bring the gun up as before, naturally and quickly, and fire. You may not be able to decide from the first shot or two, but after a succession of shots you will probably find that the charge—you will see the black splash of it on the whitewash—is being pretty consistently thrown in one place, say, low to the left or high to the right. If it is being thrown high your gun is too straight in the stock, and you will want more "bend," that is, the stock at more of an angle with the barrels when looked at from the side. If, on the other hand, you shoot consistently low your stock is either too short or it needs straightening, that is, being brought more into the same line as the barrels. To settle this point with the try-gun is generally a pretty simple matter.

To decide on the other, whether you are shooting to the right or left, and if so, how much your gun should be altered, is a little more complicated. It involves giving the gun what is called "cast-off" or "cast-on." The stock of a gun is "cast-off" when looking along the top of the gun, you see the stock cast to the right—that is, the right side of the right barrel makes an obtuse angle with the right side of the stock. It is "cast-on," when the left side of the left barrel makes an obtuse angle with the left side of the stock. Now, few men shoot with an

absolutely straight gun, but it needs a skilled judge to decide how much "cast-off" is needed, or whether any is needed, for much depends on breadth of shoulders, length of neck and length of arm, and something, too, may depend on a habit that can be changed, such as holding the hand in a wrong position. The object, in any case, is to bring the barrels into line with the eyes when the head is in a natural position for aiming, and your gunmaker, with his long experience, will see at once whether your stock needs to be cast off or not.

He has now fitted you, and can set about building your gun. Before it is finished, or while it is still "in the white," as it is called—that is, before the stock is polished, the action case-hardened and engraved or the barrels browned—he will probably want you to try it at targets in order to make certain of this or that nicety of fit or balance, for with a weapon weighing a little differently from the try-gun, your shooting may also vary a little. Having paid your last visit to his trial grounds, you may wait at home for the day. That is, the day on which you will open the leather case with its red cloth lining and its polished wood compartments, and look for the first time on dark, shining barrels, the mottled blues and browns of lock and lever, and the grain, smooth and deep of the perfect walnut stock—your own. Do I not remember my first gun? But I remember, too, the day of my pair of guns, and, remembering it, I can stand and stare at them even now.

And now you will be off to the shooting school. Two things you are to learn : one, if you can, which is to hit ; the other, because you must, which is to use your gun safely. Here you are, then, with an instructor at your elbow, to tell you what to do, what not to do, and what you are doing. He has a bag of 100 cartridges, he will load your gun for you and show you how to load it for yourself, and you are to fire at clay " pigeons " thrown from traps.

You are standing in an open field. In front of you, concealed by a mound of sods, is your coach's assistant, who is to release the springs of the traps at his word. Your first " birds " are to be thrown straight away from you—just the shot one gets so often with partridges and grouse when walking them up. Your gun is in your hands. " Right ! " calls your coach, whing goes the trap, and a little black saucer flies spinning up and away. Up comes your gun to your shoulder, your finger is on the trigger (those hours on the miniature rifle range at your preparatory school were useful in making those actions so naturally easy), you pull, and the little black saucer spins on smaller, thinner, farther down.

" You were underneath. Don't hurry, but look at the bird, bring your gun well up, and pull."

Whing ! Away flies the black saucer, up comes your gun, you pull, and the saucer vanishes—a tiny cloud of black dust hangs in the air.

You have hit your first clay—an easy shot, no doubt, but it is satisfactory to think that if it had been a partridge you would have dropped it

dead. You practise at other shots of the same kind, missing a few, but hitting more; then at double rises. These are baulking at first, for you have two birds to think about instead of one; but you get used to thinking about them one at a time, and when you have scored two rights and lefts your coach takes your gun and leads the way to the next field, where you are to shoot through "the covert."

The "covert" is a long strip of rough field with bushes and dead brushwood scattered through it, and with concealed traps which are to throw up clays at unexpected moments and in different directions, going away right and left, or coming back over your head, or crossing, or rising two at a time. Now and then, too, as you walk with your coach down the ride which runs through it, you suddenly see a clay saucer bowling fast over the grass in front of you, and realise that you are to shoot a rabbit. Here, again, you miss and you hit, but you are getting used to the feeling of having to decide quickly how and where to fire, and your coach at your elbow behind you is quietly telling you to do or not to do this or that; to carry your gun pointing forwards and downwards, not to the side; to keep your finger off the trigger until you mean to pull; not to hurry, not to fire a second barrel without aiming; to look well at your birds and pull the moment you are "on" them—not to poke at them. You feel, when you have come to the end of the covert, that you have learnt something more.

Now for a different kind of shot. Hitherto you have been practising at birds getting up in front of you and going away—that is, birds as you shoot them when "walking up." Now you are to try birds coming towards you, that is, the driven shot. You take your stand some thirty yards from a high hedge, on the other side of which are traps on a platform. These are to fling clays towards toward you, or to your right and left, just as partridges come over a fence to the line of guns. Whing! Here comes one straight to you, a thin, black edge growing quickly—how quickly!—into an oval, a circle, a black disc spinning over your head. You did not realise how fast it was coming, and you never got on to it at all. You are nearer the next, but still behind it, your coach tells you; he wants you to throw your gun right on the bird the moment you see it, but to keep swinging the gun up because the bird is rising as it comes nearer. You get well on to one at last. It vanishes into powder, and little black fragments whizz over your head. You get another, miss another, and then hit three running. This is happy work.

"Right and left," calls out your coach, and the clays begin to fly to the sides. This is a new test, and you begin by missing three or four. You have something new to learn, which is to keep swinging to right or to left in the line of the bird, just as you learnt to keep swinging your gun up as the rising bird came straight towards you. You are to try now to swing right on to the bird, and you will find in swinging that what you do is to

calculate in your mind the line the bird is taking, to swing on to that line, to find as you do so that you are catching up and are going to pass the bird, and then pull your trigger as you pass it, still swinging. Your gun races the bird, and you shoot as the muzzle wins. You are not looking at the muzzle—you do not see it, indeed—but you feel that it has swept past the bird.

After partridges, pheasants. Those birds which you have watched in the Christmas holidays, when you have been standing behind one of the guns outside the covert ; those birds getting up far back in the wood and coming forward, brown diamond-shaped specks against the grey-blue winter sky, higher and nearer, collapsing above the gun, hurtling to earth—how is the shooting-school going to show you these ? Behind three tall elms rises a wooden tower, with ladders scaling from stage to stage. On the top stages there are traps, and the traps throw the clays over the crown of the elms, and if you can hit those clays time after time, you will shoot well enough at the best pheasants you are likely to see.

Out flies the little black disc, small and high, straight over you. A new action with your gun —you had not realised that it needed so strong a grip and so quick and muscular a swing to get on to that bird, which is over you—and you know it—as you pull your trigger. A yard behind it, your coach tells you. Behind, you knew ; but how could he tell for certain ? How does he know that you were not to the right or left ? You

remember, when you think of it, that all through the morning he has been telling you exactly where you were shooting. You have taken his word for it, but when you come to puzzle over it, how, precisely, can he tell ?

Of course with some shots anybody could tell you—it is obvious when you are too slow or when you stop swinging. But he, with long experience, can see the shot. A grey haze to the right, left, in front, behind the clay—he sees that as you pull. It is the slightest thing, just the darkening of the air near the clay, and a casual glance would not show it to anyone, but he knows what to look for and how to see it. You, for that matter, could see the haze sometimes, if he were shooting and you knew how to look. You get behind him and look into the air along the line of his barrels. You will see the sudden grey haze near the clay—that is, if he chooses to miss, for otherwise you will merely see the fragments of the clay flying. Or you can see the haze, at all events, on a sunny day ; on a dull day it needs practice. You can only see it by looking in the direction in which he fires, which is easy to realise when you think it out. If the shot charge is crossing you, the tiny pellets change their position too fast to be seen ; but if you are immediately behind them, they travel continually in the same position relative to your line of sight until they are too far to be distinguished. And, of course, being a big group of, say, 250 pellets, they make a fairly thick pattern against the sky. Just in the same way, if you stand behind the firing

point on a rifle-range, on a bright sunny day, you can watch the bullets travelling like silver streaks to the butts.

These straight overhead shots are simpler than others, in that you have less to calculate. The direction of the flight is so obvious that it is natural to throw the gun on the line at once ; all that needs to be estimated is the pace at which the clay is travelling. When you have mastered this you will probably find that you can break clay after clay. But it is different when the trap throws the clay to the right or left, or half-right or half-left, or perhaps only a little out of the straight. Then you have to calculate not only pace but angle, and, in addition, you have to remember to swing your gun up as well as to the right or left, or you will be below your bird. That is the great tendency—to be behind and low. It is the explanation of most misses. Only practice will teach you to swing up and in front of these high crossing shots ; only practice, too, will teach you to bring up your gun to your shoulder so as not to tilt the barrels to the right or left, which would throw you low ; and only practice will teach you when and how to move your feet. Generally speaking, you should be standing square to the place from which you expect your bird, with the right foot a little drawn back ; but you will find that for high crossing shots you will want to pivot on the foot nearest the line of flight, and raise the heel of the other foot, *e.g.*, for a bird crossing high to the right, you will want to pivot on your right foot and raise your left

heel. This enables you to swing up as well as to the right, whereas if you remain firmly rooted on both feet your left shoulder will drag your gun back and down.

Talking about position, you are sure to hear a great deal about the necessity for the "straight left arm." Many very good shots shoot with the left arm quite straight, grasping the barrels as far forward as possible. No doubt in the case of many kinds of shot this leads to quick alignment, for it is natural, in pointing at any object quickly, to do so with a straight arm. But the position has its disadvantages, for there is a certain stiffness inseparable from it, and in certain cases, for instance, in that of the bird crossing high to the right just mentioned, you cannot keep the left hand in its original position. The fact is, that there is no hard-and-fast rule about the left arm. If you find that you are holding a gun naturally and easily with your arm crooked, then that is probably the best position for you. It is like a stance at cricket; not every batsman has the same. You can take up a stance which is plainly bad, in that it will prevent you from making certain strokes—for instance, you cannot drive to the off with your left foot pointing to leg. In the same way with holding a gun, you can hold it obviously wrongly; you can crook your left arm and grip the barrels just in front of the trigger guard, and you will then not be able to swing it. But do not force yourself to hold it in any particular way because that way suits someone else. The reason why the straight

left arm has been so often insisted on is, after all, partly fashion. His Majesty the King has always been an extremely fine game shot, and when he was Prince of Wales, it was noticed that he always shot with his left arm straight and his hand grasping the barrels far forward. This position was immediately copied by many people who otherwise would not have thought of it, in the supposition that it must be the secret of fine shooting. But it is not, and not all fine shots adopt it. The secret of first rate shooting, after all, is one of eye and hand, as it is of cricket or racquets. Nobody ever made a hundred simply by crouching over his bat like G. L. Jessop; and, I suppose, more runs have been presented to the other side by would be googlie-bowlers than by any others.

We come back to the question of eyesight. We have been assuming that you will be easily fitted with a gun, and will find practice at clay birds pretty straight-forward, your right eye being naturally the master. But suppose it is not, and that your gun-maker discovers it when he first sees you pick up a gun. He may want to build you a gun with a cross-eyed stock, that is to say, "cast off" so that while the butt comes into the right shoulder, the barrels are aligned so that the left eye looks down them and not the right. Or he may advise you to shoot from the left shoulder, when you would prefer to shoot from the right. I do not say that he will advise you wrongly in either case; but do not be in a hurry to change your shoulder, or

to let him build you an ugly gun, for a gun with a cross-eyed stock looks more like a musical instrument. There are other methods of dealing with a master left eye. One is to use a disc fitted to the gun, so that the right eye alone can look along the barrels. Another is a method of holding the barrels with the left hand turned over so that only the right eye can see past the root of the thumb. By being taught to hold his gun in this way I have seen a boy transformed from a bad shot into a good shot in one afternoon.

Your first lesson at the shooting school is over, and if you are wise—and also fortunate, for cartridges are expensive to buy in these days, and it does not take long to shoot off a couple of hundred—it will not be your last. You have still much to learn—indeed, you will discover that happy and encouraging truth every day when you are out shooting, as long as you can walk heather or stand behind a hedge. But you have travelled, at all events, some distance along the beginning of the road. You are getting hold of the rudiments of knowing how to hit, and when your first covey rises before you in the wet mangels or the warm, scented clover, you will find your gun comes up as it should to your shoulder, and your first partridge may even seem easier to you than your first clay pigeon. Best of all, you may be able to look back in the evening, when the scattered partridges are calling to each other over the stubbles—that call which you will come to love and listen for year after year—on a day when you did not wound.

CHAPTER II.

KIT AND GEAR

IT is not always comfortable to be fashionable. I am not sure how closely fashions in shooting clothes are bound up with fashions of golf, but golfers are certainly fashionable people—at, least they all seem to be dressed alike in the photographs—and perhaps that is the reason why fashions in shooting clothes seem to change more often than they used. All the while, of course, there are certain requirements which clothes for shooting must fulfil ; and it is plainly true, too, that you are not well-dressed if your clothes do not suit what you are doing. Yet the fashionable may forget this.

Take, for instance, caps. There was a particular kind of cap in the shops a short time ago which was designed in the first place, presumably, for golfers, or motorists, or for use at watering-places, perhaps ; at all events it cannot have been designed for shooting. But it often came out. It was very large and projected on all sides over the head, especially in front ; it was circular and completely flat. Observed from above, it presented the appearance of an immense mushroom, with a human being for the stalk. But it

was unfitted for shooting for the simple reason that it was a nuisance in a wind. A strong puff of wind would get under it and either lift it crooked or take it completely off. It summed up the characteristics of the garment which is fashionable and uncomfortable. After a time it disappeared, and its place was taken by Homburg hats of various types—an improvement, perhaps, but not, I think, an ideal covering. To-morrow the fashion may change again.

Let it change. Comfort is the first thing to think about, so that it follows that what you are used to will probably suit you best. Some people prefer hats to caps, and bend the rim down to carry off rain. Personally, I like to shoot bare-headed, and fancy I can see and hear and move more quickly without a cap than with one ; but you must have some kind of covering if it rains, or the water runs down your neck, and you may have to stand, too, particularly when driving, with the sun immediately in your eyes, and then you want a shield or you cannot see. So that what I do is to carry a light cap folded in my pocket, and put it on when I want it.

To take other clothing in order—underclothing to begin with. If you are walking after grouse or partridges on a really hot day, do not make the mistake of thinking that the less you wear the cooler you will be. When you are facing the sun you may feel comfortable enough with your coat open and nothing between you and the sky but a flannel shirt ; but you cannot walk in the same direction all day, and the sun on your back is a

very different thing. Also for lunch you may be sitting in the shade, and even on the hottest day there can be a cold touch in the wind round the corner of the wheat-rick. The pleasant way with a flannel shirt on a hot day, by the way, I think, is to wear no tie. It is perhaps not fashionable, but why not set the fashion ? Nobody wears a tie, after all, for cricket.

On a very cold day you will be warmer with two thin vests than with one thick one. That is true of all forms of clothing—stockings, for instance. But two pairs of stockings belong to conditions of fishing rather than shooting ; to wading for hours together in the snow-water of February or the ice-rimmed pool of November. You may possibly find some day, when flight-shooting on the seashore in high boots, perhaps, that you are better off with two pairs of stockings or with socks inside your stockings ; but standing about in the wet is, of course, different from walking.

Be sure with stockings that the feet are long enough : stockings too short in the foot make walking a misery. Boric powder sprinkled in the foot saves blisters : it is cleaner and pleasanter than soap, which is the old-fashioned preventive. But you may wish to wear gaiters and not stockings at all. Gaiters have their advantages, particularly if you have very rough stuff to walk ; and with tight-fitting gaiters you will probably wear socks. But thick stockings in thick boots will bring you home less weary and less footsore at the end of a long day than thin socks, which

will not soften the touch of stiff leather. Thick wool gives, I think, more spring to the foot, and takes the jar of sudden slips or unseen stones on rough ground. With stockings you will want garters; and though I know men who prefer to any other kind the knitted worsted garter of the Highlands—a woollen braid which is wound round and round with the ends tucked in—personally I like the simple home-made garter of broad elastic. It has its disadvantages to-day, I admit, for the silk is worse and rubber much worse than it used to be; but it is simple, easily made, and easily put on, and if it is not too tight, I do not believe it hinders the circulation any more than worsted.

Thistles, gorse, brambles—you want gaiters for getting through those. Thistles grow plentifully in fields that are not kept clean, and, indeed, in other fields. They add to the cover in potato fields, and you cannot avoid them between the drills. Short gorse is excellent cover for rabbits, and brambles hide game of all kinds and must sometimes be walked through. With good gaiters you can ignore spikes and thorns (though you will get your knees scratched); but good gaiters, too, can be stiff and tiring. A make which has much to recommend it is the Poethlyn. These are easily and quickly put on and off; they are made of various materials, of which canvas is light and cool; and they are fastened round the top of the boot with a broad leather band which has the double advantage that it keeps out particles of sticks, heather, bracken, and so

on, and can be undone, if your bootlace works loose, without taking off the whole gaiter.

Boots or shoes? Shoes may be light and cool, and with gaiters or spats will keep out heather, bracken, and so on fairly well; and, since you will see many Highland keepers and stalkers wear shoes, you may decide that what is good enough for them is good enough for you. But, personally, I should advise boots. The average man, I believe, can go a longer and a harder day in boots than in shoes, and the leather round the ankles will save many knocks and bruises. And in wet covert, such as swedes after rain, or over wet ground, as when you are walking a snipe bog, shoes are hopeless. There is a further advantage, too, in boots as regards shooting. Two of the necessary conditions for shooting well are firm footing and correctly placed feet. You cannot be as steady in shoes as in boots, and on rough ground you will not move your feet quickly and confidently if you are afraid of twisting or bruising your ankle.

Boots must be waterproof. Good leather is not as cheap as it used to be, nor as easy to get; but good boots, even when dear, are the best economy. There is no better leather than porpoise hide, and none more pliable nor more easy to walk in. To make boots waterproof, stand them in a bath of neatsfoot oil, which you can get from any ironmonger. Pour the oil inside as well as out, and leave the pair in the bath—a foot-bath does very well—over-night. You will be astonished at the amount of oil which the

leather will drink. Let the superfluous oil run off, and then stand them aside for a few days before wearing them. If you put them on at once, you will spoil your stockings. But the leather soon absorbs the oil altogether, and boots which have been thoroughly soaked in this way will be completely waterproof. See, by the way, that the welt is wide. A broad welt is a great comfort. You will want good nails, with a double row at heel and toe. Rubber soles or studs are useless for shooting; they slip on wet ground and kick out on stones.

As for jacket, knickerbockers and waistcoat, the essential is ease. Old clothes are more comfortable than new. Knitted waistcoats are better than cloth, as being warmer and cooler (not a contradiction) and hanging more loosely. Knickerbockers, I think, are easier with buttons than with laces, for the eyelet holes for the lace means stiffening. A jacket should give the arms complete freedom, and have good roomy pockets. With a Norfolk jacket, which has a belt, you can have a hare-pocket fastened to the lining, if you like, and can carry a hare or birds, or rabbits (very likely swarming with fleas, but they will not bite you) if you choose to do so. Such a pocket can be lined with waterproof material, like a fishing-bag, and can be turned out and washed. But you will not carry a hare or rabbits in pockets if you can help it; they are aids neither to good shooting nor good temper. And, indeed, a Norfolk jacket is in some ways heavy and clumsy. There are special patterns of shooting

jackets made by different firms of tailors more or less to be recommended ; the essential is that by means of gussets, and so on, the arms should be perfectly free.

As regards materials, it looks better, no doubt, for jacket and knickerbockers to be made of the same. Fashions in cloth change ; but you will not get better cloth for shooting than the Scottish or Irish homespuns. Harris tweed is delightful stuff, and so are the rolls of homespun that you used to be able to buy in Ireland at the door of the cabins where they are made. Tailors will make these up for you, for a fee and with a sigh, it is true ; but there is a new pleasure in wearing a jacket made from cloth one has bought with a gun in one's hand on a snipe bog.

Clothes made for you are the best. But you may, in a hurry, perhaps, want to buy a jacket ready made ; you can see dozens hanging in the large stores, and they are good enough for rough wear. But the tailor who makes them does not shoot, or he would not add a right-hand breast pocket sewn on outside. This will catch the toe of the butt of your gun. Cut it off, and keep it for patching the elbows of your jacket when it is really comfortably old. One of the advantages of these ready-made coats is that you can get them without a cloth lining, which makes them excellent wear on a hot September day. Your own tailor will not make you a jacket without a lining while he can see to plead with you. Finally, if you will be unfashionable, but the possessor of a garment which will last a lifetime,

get a pair of knickerbockers of drab corduroy. For rough walking, hard wear, and warmth in winter, there is no other stuff like corduroy. You will not see corduroy in the photographs in the illustrated papers, but if there were no virtue in that noble material it would not be worn by gamekeepers.

Pockets will carry cartridges, and I think that the weight is best distributed in the ordinary side-pockets, so long as they are not so full as to drag the arms. If you must carry a lot, and find your arms being dragged, put two or three in your breeches pockets. You will not notice them, and it is wonderful how two or three will lighten a load. Some people like a cartridge belt; I cannot bear such a thing; it is hot and tight, prevents quick movement, and hangs the weight unscientifically by an uneven side pressure. Nor do I like carrying cartridges in a bag: the broad strap across one's chest clips one's clothes, which makes unnecessary heat, and shortens one's breath. Pockets are the best.

Cartridge bags may be made of canvas or leather. Canvas is light, but lets in the rain. Pigskin lined with cloth is better. But pigskin when it is new is aggressively yellow. It can be made into an admirable soft brown, and also pliable and practically waterproof, by a couple of dressings of Mars oil. Cartridge bags are very much alike (though I am sure I could pick out mine from a heap in the dark by the feel of the leather) and you will want to distinguish yours quickly when it is packed with others in a car,

or given to someone to carry for you, so have your initials in black block capitals on the base of the strap fastening the flaps.

There are certain patterns of cartridge bags with spring locks, double flaps, and other ingenious contrivances designed to prevent cartridges being stolen. As to these, I can only say that I have never tried them. No doubt cartridges are occasionally stolen by beaters and other persons who are given bags to carry, but so far as I know I have never had any stolen from me, and I have never had any reason to be suspicious of any one who has carried things for me out shooting. In any case, I should be ashamed to hand a keeper a locked bag, or to unlock and lock a bag which was being carried for me. To produce a key in the middle of a group of farm labourers, and insert it in the lock of a bag, actually in the hands of one of them—No ! For a magazine, of course, you want a lock and key, for you have to travel with a magazine, and may have to leave it about in all sorts of places ; but a cartridge bag is different.

You will find it convenient, by the way, to have bags of different sizes. There will be many occasions when you will not want to carry more than fifty cartridges ; sometimes you will not want more for the day, and sometimes you will know that you will only fire a few cartridges in the morning, and can add to your bag at lunch. Not only is it useful to have a small bag, but on hot August or September days the man or boy who carries your cartridges will be grateful to

you for not giving him a big heavy burden on starting off in the morning. A hundred twelve-bore cartridges weigh ten pounds. Another advantage of having more than one bag is that you can take different sizes of shot with you without mixing them. And as to cartridges with different sizes of shot, a small hint if you can have them loaded for you, and are not compelled to buy standard cases, have them different colours. Anybody, even the least intelligent, can pick you out greens or blues or reds in a moment ; but if all your cartridges are the same colour, you will spend hours in the year examining the cards over the shot and sorting them in your magazine.

As for the cartridges themselves, matters are fairly simple. Some people have their favourite loads, which suit them, or their guns, better than others ; but the standard loads supplied by Nobels are good enough, for practical purposes, for the majority of people. Powders may be roughly divided into two classes, 42 grain and 33 grain powders. The former are what are called "bulk" powders ; that is, it was the custom in the early days of nitro-powders, when they were gradually ousting black from general use, to make them equal in bulk to that of black powder, so as to take up the same amount of room in the cartridge. To do this, a certain quantity of outside matter was added to the actual explosive. Later on it became customary to omit this outside matter, and to reduce, by so doing, the bulk of the powder. Thus Schultze,

which was the first nitro-powder to displace black powder, is a 42 grain powder, this amount being equivalent to 3 drams of black ; while the more modern Smokeless Diamond and the improved E.C. are 33 grain powders. An average or standard load of either of these latter is, for a 12-bore gun, 33 grains powder and 1 1/16 oz. shot.

Now for the sizes of shot. Here again tastes vary. Some people shoot all through the season with No. 6. But I think for grouse late in the season No. 5 or even No. 4 is better ; for a rabbit-shoot I prefer No. 4, as I think it knocks them about less and kills a long shot better ; and personally I prefer No. 4 for duck. Some people like No. 7 for duck, and argue that as you ought to hit them in the head and neck, No. 7 gives you a better pattern. So perhaps it does, but you will not always hit them in the head and neck, and they will carry away No. 7 when hit in the body, when the heavier No. 4 will bring them down. For snipe No. 8 is the best size ; and with No. 8, should you get the chance, you can kill teal or rabbits.

A magazine may not be an absolute necessity, as a cartridge bag is, but it is certainly worth having. Cartridges can be taken about in the boxes in which they are sent from the makers, and can be kept in the gun-room or lobby in the same way ; but there are obvious advantages in a magazine, with its handle, lock and straps, and its divided compartments to take cartridges of different loads. Magazines must be strong, for they get a lot of knocking about and carry a

heavy load. The best are of leather, brass bound at the corners, and as for size, one that holds three hundred cartridges is big enough—when it is full, it will weigh, perhaps, thirty-eight pounds. A magazine to hold five hundred is too heavy for convenient handling. If you want a large case to hold cartridges, not for travelling, but merely to stand in the gun-room, have one made (or make it yourself) of oak.

Gun-cupboards, with racks to hold several guns, and well-fitting doors to keep out dust and damp, are unquestionably delightful possessions, with the sole disadvantages that they are expensive and take up room. They have many advantages. You can put guns in the rack when you come in from shooting and do not want to clean them at the moment—when you have come in for lunch or tea, for instance, for of course you will clean them at the first opportunity, and never leave them till the next day. You can stand the guns in the rack when they are cleaned; and you can take them down at any moment—a great advantage this—to be sure that no speck of rust or dirt has escaped you. And, again, you have them ready at a moment's notice at any minute, any day in the year. A hare, a rabbit in the garden, a little owl mewing in the ivy tree, wild duck on the pond—the news is brought you, and you are out of doors with your gun at the word. Whereas, with a gun strapped in its case, with the unbucklings, unstrappings, unfastenings, fittings, putting together crooked because you are in a hurry, and

the disturbance of all surroundings by placing the case where you can open it and shut it, your opportunity vanishes; the little owl has flown, the hare has leapt the fence.

With a gun-cupboard, too, you can have a drawer below—a drawer with tools, tow, oil, pull-through, chamois leather and cleaning rags. And cleaning rods should be kept ready put together. How many hours may one not spend, looking at shooting spread over many months, in screwing on the handle of a cleaning rod, unscrewing it, and placing the rod in its socket in the gun case! How irritating not to be able to find the familiar oily rag which someone borrowed just as you were shutting up your guncase with its cleaned guns the day before! But with a cupboard, how satisfactory not to have to pack the oily rag in the case with your gun, which is really the only safe place to keep it unless you have a drawer. And last, with what pleasure, as you come into the room, will your eye rest on the lines of light running up the dark barrels, the shining, glossy stock; the delicate tracery of the beckoning monogram. A cupboard is the place into which to put your guns, if only because you will so often take them out of it.

Two drawers below the cupboard are better than one, for drawers have habits of their own, either neat or untidy, and a drawer which holds tow and oily rags is sure to be untidy from the beginning and to get worse as the habit grows. In the second drawer, which will be neat, you can keep such things as cartridge boxes,

decoys, rook-rifle ammunition, gun-covers. The last are useful if you want to take a gun on a journey by car; they slip on in a moment, and protect barrels and stock from scratches and mud. Four or five guns in a car are apt to collide, and you may very well also travel with a retriever anxious to get to work. He will leap into the car, or he will be dragged, but he will probably in any case bring some of the road with him. Slip-on gun-covers are made of various materials, waterproof and others. Waterproof covers are apt to perish, and the best, I think, are canvas bound with leather. Have your initials stamped in block capitals on the leather by the strap.

One or two necessaries remain. For walking up birds you ought to have a game-carrier. Keepers have a rough and ready way of putting a grouse or partridge straight into the game-bag, which is unhealthy and otherwise detestable. Game ought to be carried till it is cool with the air all round it, and not thrust reeking into a bag. Look at the difference between birds tossed out of the wet jumble of a bag on a hot day in August or September, and those placed in a game-carrier as they are picked up, and laid out at lunch with their feathers clean and smooth. And the difference is not merely in the look, for on a very hot day game carried in a bag may be uneatable. That is the worst thing that can happen, and it will never happen with a game-carrier.

But there can be other accidents. A carrier is made of a long flat, narrow piece of wood, with

a slit running down the middle, and at the end of the slit a round hole, into which the head of the bird is placed so that the neck can be pushed down the slit. The hole is then closed with a brass flange which swings round on a screw. But if the hole is not closed, the bird may very well slip back and out again, and, if there are several birds in the carrier, one or two dropping out may very well go unnoticed. This decreases the bag. Another fault with a carrier may be that the slit is too wide. Young partridges are sometimes small, and their heads may slip through. You can remedy matters by tying a brace together with string. A piece of string in one's pocket has many uses.

Shooting sticks are for the mature. They are useful for long waits in a grouse-butt or at the end of a covert, and as it is a tiring business to stand for a long time with nothing to do, they may even be said to improve one's shooting. But they can be a nuisance to carry. There are various devices in the way of straps, holders, and so on, for use when walking—for, of course, with one hand occupied with the shooting stick you only have one hand for your gun—but the best carrier, probably, is someone else. I will own that I dislike carrying a shooting stick in any position or by any method, so much so that, though I know during the day there will be times when I should be glad of one, I generally leave mine at home.

CHAPTER III

SAFETY FIRST

I ONCE saw a man walk towards a group of other men carrying a gun. They were standing close together talking, while the keepers were picking up pheasants after beating through a covert. As he joined the group his gun went off, and one of the group leapt into the air. The rest of us rushed up to see what had happened, and found a smoking gun lying on the ground, a very much astonished man staring at it, and another very considerably scared man looking at a hole in the ground as big as a wash-basin which had been blown immediately under the heel of his boot. No one was hurt.

He had gone up to that group (*a*) carrying his gun loaded in both barrels, and (*b*) at full cock ; (*c*) pointing it anywhere ; (*d*) wearing white woollen gloves ; (*e*) with his finger on the trigger. By chance, as his finger pulled the trigger, the gun happened to be pointing at the ground instead of at someone's leg, back or head. How was it possible that any man could do such a thing, and how could such a man be a member of any shooting party, you ask ? It was his own shooting party, and those who had accepted his

invitation did not know that he was shooting pheasants for the first time. They did not know that he did not know that woollen gloves on a cold day prevent you from feeling anything. They did not expect that he would walk into a group of other persons carrying a loaded gun at full cock, and they had no idea that he went about with his finger on the trigger.

It is in this way that accidents happen. But they may happen in other ways, and with other people besides beginners. The most dangerous shot I have ever been out with was a man who had been shooting all his life. He was a parson, and pointed his gun generously at every part of all whom he met. Why did anyone ever shoot with him, you ask again? Some who shot with him never did shoot with him again—not, fortunately, because of inadvertence on his part, but because they refused further invitations. But the fact is that you cannot be certain of avoiding these dangerous shots. It still does happen that these men who are wickedly and criminally careless with their guns do get asked to shoot, and do get others to shoot with them. Some men do not seem to mind a careless shot; sometimes they are careless themselves. In any case, when one accepts an invitation one cannot always ask one's host who his other guns are and whether they are safe; and no one, I suppose, who has shot through many seasons, has not more than once walked or stood next to a man who used his guns carelessly and to the danger of others. It is a disturbing sight to turn round and to catch

sight of two barrels like two round black O's looking straight at you ; but it is an experience which has come the way of most men.

You, at all events, can determine that whatever anyone says of you he shall never say that you are a dangerous shot. And so, begin by making it an absolute and never broken rule that your gun, loaded or unloaded, shall never be pointed at any human being. This, you may decide, is easy enough ; and so it is when you have once got into right habits. But there are times when, without meaning to do so, you may point your gun accidentally at a man or a dog. If you are on the watch for such moments, you can avoid them.

To take the simplest situation first. If you are walking with other people from one place to another, along a road, say, or a ride, in the intervals of shooting, always carry your gun unloaded. It is not enough to put it at safe ; unload. It may chance that a pigeon comes over, or that a pheasant or partridge gets up at an unexpected moment ; and one of the party, perhaps, may throw up his gun and bring off a quick and difficult chance. Do not be that person. Somebody, very likely, will exclaim " Good shot ! " but there will be others whose inward comment will be " He was walking with his gun loaded when he was not shooting. He is a man to avoid." And, if, as it might possibly happen, he should turn to you and ask why you did not shoot, and you should be able to reply " I had taken my cartridges out," that

answer, too, will be noted, even if nothing more be said.

Now for walking in line. If you are shooting grouse over dogs, you may prefer to carry your gun over your arm or your shoulder—in the latter case, keep the trigger-guard uppermost—and only to come to the "ready" when you are walking up to a point. If, on the other hand, you have no dogs out, and are walking in line with the chance that something may get up at any moment, you will be carrying your gun in both hands ready to shoot. Of course, if a bird gets up close to you it does not matter how you are carrying your gun—there is plenty of time to bring it up and fire when the bird is at a proper distance. But you must also be on the look out for wild birds and long shots, and you will be too late for birds getting up far out unless you are carrying your gun so that you can bring it up with a single motion. But you will find, when carrying your gun with both hands in this way, that you will have a tendency to swing the muzzle round to the left. If you do this you will be pointing it at your left hand neighbour—a situation which he will take in at once. Be sure that you keep the point well to your left front.

Again, a bird may get up and fly low towards or across a hedge or bush, and you may not know what is the other side. It is never safe to fire unless you do know. In September in particular children go out blackberrying ; and, although gamekeepers do not approve of such

doings, and very possibly even the children's mothers may have told them not to go here or there, children wander the easiest way where blackberries grow, careless of guns and men. Behind that hedge towards which the partridge flies you are quite likely to come on pink pinafores, blue mouths, and a half-filled basket. It is tiresome, but do not fire at the partridge.

Roads may make difficulties, especially when they are sunken. Unless you can see every yard, it is never safe to fire towards a road. A bicycle comes along suddenly, silently ; just beyond that holly hedge may be a farm cart and horses ; perhaps you are looking to the right and an old woman is trudging from the left. You cannot fire, in any case ; the covey must cross the road untouched.

Waiting for driven grouse and partridges means more than one thing to think about. Generally a line of butts runs in a straight line, though not always : I know one particular set of butts on a good driving moor where there is an end butt placed half left in front—a horribly dangerous place. But even when the butts are in a straight line you may be unable, owing to the lie of the ground, to see your neighbours, and in that case you must make certain where they are. When driving partridges you can nearly always see the line of guns ; but both with grouse and partridges the same rule holds good—never swing down the line. Fire only to your front or rear, never across the next gun. If you turn to fire at a bird which has passed you, keep the muzzle of

your gun pointing at the sky above you—never down the line. There are angles to your right and left front, forming the section of a circle within which it is safe to fire, and, roughly speaking, the arc of this circle may measure sixty degrees; but you must remember that whenever you are taking a bird at all to your left or right front you are swinging, and your gun will pass the angle at which you kill the bird. That means that the spread of your shot will be considerably more to the left or right than the spot at which your barrels are pointing when you fire, so that you must allow for the swing to finish inside your arc. In practice you will not find this difficult. A few shots at "driven partridge" clays at the shooting school will help you to judge the angle at which a shot can safely be taken—you can measure an angle of thirty degrees on each side of you and stance, for that matter—and when once your eye has become accustomed to this angle you will find that instinctively you will shrink from firing outside it—that is, at an angle nearer to the line of guns.

This rough rule of measurement applies, of course, to birds coming at an ordinary height, or low rather than high. If birds are coming over very high up, as they may be if the guns are stationed in a dip, or as you sometimes get them coming off the hillside when grouse-driving, it may be safe enough to take a bird at an angle which, if the bird were low, would be dangerous. But it never can be safe, at any time, or however high the bird may be, to point your gun down

the line. Many men have lost an eye through falling shot.

Now for others besides your fellow-guns. Beaters lead a dangerous life. If you want to realise just how dangerous it may be, try a day's beating and notice where shots are fired when you are coming up to the line of guns behind the hedge. It would be salutary if certain types of men who shoot could be exchanged with the beaters at these moments. For the beaters, it may often happen, are invisible to the guns until they are within a few yards of the hedge; but they have been within shot for a long time, and when a gun fires at a low partridge coming towards him he may be quite easily firing straight at a beater whom he does not see owing to the hedge. He would be horrified at the idea of firing such a shot in the open; but he goes through a drive, firing more than one such shot, perhaps, without any feeling of horror whatever.

Remember, then, that from the first moment the drive begins the beaters are always coming nearer to you; that you will very likely not see a beater until he is right up to the hedge, and that previous to that moment there is a period when you must take your birds only when they are well up in the air, clear of the level of any possible oncoming man. Of course you will be helped to judge such distances by what goes on during the drive. When birds get up and are on the wing towards the line of guns you will hear the keeper's whistle, and from the sound it is easy to judge the distance at which the line of

beaters is approaching. Or, if the beaters are coming from several fields away, you can get a rough indication of the moment when they come into the last field, for the larks, thrushes, linnets, and so on, will get up in the air and come chirping and flitting towards your hedge.

The same rule as to not firing towards the beaters applies to covert-shooting, only with even more severity. If you cannot see the beaters until they are close to you, when you are partridge-shooting, it may quite well happen in covert-shooting that you will not see the beaters at all until the actual beat is finished and they are all out. So that one of the first things to remember is never to fire towards the covert at a low pheasant. One does not want to fire at a low pheasant at any time, for it is a poor form of shooting; but in this case it is dangerous. You may have to take a low pheasant when he has passed you, but never, when a wood is being beaten towards you, take him in front of you. But do not think that in avoiding a low pheasant you have avoided all. The low bird that will tempt you will be a woodcock. He seldom flies high, and he has a disconcerting way of flitting out from the trees and turning sharp to the right or left. When he does that you can only take him if you can see clear behind him, so that often he is only safe for the end gun.

Then there will be hares and rabbits. If you are standing in a ride with the wood being beaten towards you, one of the first things you will notice is the astonishing quickness with which

the hares and rabbits will begin to arrive. Indeed, if you are slow in getting to your place you will very likely see the rabbits crossing the ride before you get there, which is annoying, particularly if you have not had much shooting up to that time. Having got to your place, then (and get there as quietly as you can, avoiding, if you are able politely to do so, the neighbouring gun who insists on talking all the way by your side) stand where you can see into covert as well as may be—you will often find that a yard will make a difference, though you must without fail stand where you are placed—and look quickly and carefully over all the ground you can cover. In time, and with practice, you will detect in a moment the slightest movement, the tiniest change of colour, from brown to grey, from light to dark. Be sure, as you look, whether it is a rabbit moving; it may be a pheasant. And you can only fire if the beaters are far off. You will hear their sticks, and may be able to see them: if you can see them it is unsafe. You must then wait for the rabbit to cross the ride, and can only fire at him when he has crossed, which generally means you have to be quick, for he darts across and vanishes. But whatever happens, you must never take him as he crosses. If you do, you will be firing in the direction of your neighbouring gun, when the ride is straight, and even when it is slightly curved, and you may not be able to see him, the direction will still be too near to be safe. Remember, a stray pellet may easily ricochet off a stone or glance

from a hard tree trunk; and remember, above all, that on a frosty day, when the ground is like iron, the whole charge on hitting the ground will scatter in all directions. You may say that in a really hard frost it is dangerous to shoot at a rabbit anywhere except absolutely in the open.

So much for the danger of hitting a fellow-creature. But there are also dogs. If it should happen that you are out with spaniels—on one of those delightful days in October, perhaps, when the sun is still hot even though there has been a frost in the night, and the air smells of wet bracken and warm blackberries—be very certain that the flash of fur you catch sight of is a rabbit, and not a spaniel; but be sure, too, even if you are certain it is a rabbit, that the spaniel's wet nose and long tongue are not close behind. That is a caution, too, to keep in mind for other days of rabbit-shooting. When you are ferreting, and particularly on those days when the rabbits are not bolting well, let the little beasts get absolutely clear of the hole before you shoot. The ferret may be close behind. And whatever you do, never fire at a rabbit while still in the hole. If you can see him moving, and he does not come out, the ferret is very likely hanging on behind.

Ferreting, indeed, although it has been called "a boy's game," and is often left to game-keepers and schoolboys to get through, when the main shooting in the coverts is over and the rabbits have to be got under, can be a dangerous

business in several ways. I have always thought it to be essentially a job for one gun, with a keeper or a friend to manage the ferrets. But you may find yourself sent out with another gun, and you may, perhaps, have to stand one on each side of a thick hedgerow. In that case, make certain that you know where the other gun is standing, and also that he knows where you are; and when you have told him where you are, don't move from there without telling him. You may want to go up to the hedge, to pick up a ferret, perhaps; if so, be sure that you put your gun at "safe." Or you may need to put your gun down altogether, to get a ferret out of thick stuff, or to listen at a hole. If you put it down, even for a moment, unload.

This process of unloading, whenever you put your gun down, or in any way give up full control of it, may seem to you tiresome and unnecessary. But it is vital. An empty gun can hurt no one. A loaded gun is always dangerous: doubly so if it is out of your hands, or if you cannot spare both hands to it. You cannot do that when you are crossing a fence or a ditch; so, when you cross either, always unload. Even if the fence is small, or the ditch easy to get over, always unload, for if once you begin to make exceptions, you will want to make more, and one day you will make a mistake. Your clothes will catch in a thorn or wire that you did not see, or the ground will give, or you will tread on that most dangerous thing, a stick sloping down hill away from you, and you will slip. If your gun is empty,

no matter: if it has cartridges in it, you do not know what may happen.

A hint, by the way, in pulling a friend, or being pulled up a bank or across a slippery ditch. Don't offer your hand as if you were going to shake hands with him. Either catch hold of his wrist with your hand underneath, so that he, too, can catch hold of your wrist; or else crook your fingers as you hold for the horizontal bar, and he will do the same. Either of these grips is strong and safe; the "shake-hands" clasp is not a grip at all. And before you offer to pull him across or up, unload.

In short, at no time, in no way, and in no particular, can the necessity for ensuring absolute safety with a gun be exaggerated. Nothing will ever make up for an accident such as the loss of an eye, to say nothing of the loss of a life, caused by your carelessness. There is only one caution that I have heard given, which was supposed to make shooting safer, that I would disregard. That is the advice to walk, or wait in a butt, with the gun at "safe" until the moment when you mean to fire at a bird. This seems to me not only an unnecessary handicap to quick shooting, but even to defeat the very object in view. If you are walking heather late in September, say, and an old cock grouse gets up far out, you have only just time, by taking him the moment he rises, to drop him before he is out of shot. If you are snipe-shooting, again, you do not want to lose a fraction of a second before lifting your gun; and there can be no question as to the fact that

you do lose time if before you aim you have to cock your gun. But, more important than this, I think that most people who have shot for years with hammerless guns would consider this advice not to cock the gun as born of nervousness, not caution. It is a nervous, not a wise and careful shooter, who is afraid to walk through a turnip-field with a cocked gun. "If you slip on a root your gun will go off, and you may kill someone," he tells you. But the answer surely is that your gun will not necessarily go off—in fact it certainly ought not to go off—if you slip on a root; and that even if it did, you ought to be carrying it in such a position that it could not hit anything but the empty air in front of you. No: I think if I were asked to join a party of men who were afraid of walking roots or heather with their guns cocked, I should prefer to let them go out by themselves: I should stay at home.

CHAPTER IV

PARTRIDGES

THE partridge comes first. The grouse season opens earlier, of course, and some boys have the luck to begin their shooting days on the moors. But I think for most of us, looking back into the past, and perhaps for most, too, looking into the future, the shooting year begins with the day when we open the gate into the stubble-field —the first of September. That was the beginning for me, at all events, years before I was allowed to carry a gun. But the day when at last, for the first time, I, in very deed, was to walk after partridges, myself one of the guns—there is no day that comes back more vividly to me than that. I remember the evening before, the night before ; when, with everything I was to wear and carry the next day placed ready beside my bed, I lay in the dark thinking over imaginary birds rising in front of me—I was to take that one there, twenty yards away, and as he fell among the glistening swedes I was to take the other to the right of him. So they rose as I lay dreaming of them, covey after covey, out of mangels, clover, mustard, potatoes ; and how, better than with those coveys, should one go to sleep on the night before the First of September ?

We used to be told in those days that the way to tell cock partridges from hens was to look at the breast feathers; if they carried a dark chesnut horseshoe the bird was a cock, and if not a hen. But that is only partially true. If when you are shooting in September you pick up a bird with a well-marked horseshoe, the probability, almost the certainty, is that it is a cock; but hens occasionally have horseshoes, more or less distinctly marked. The better test is to look at the wings. In the cock partridge the median wing coverts are marked with a longitudinal pale buff stripe running down the shaft, and on each side of the shaft the feather is mottled with grey or brown. In the hen these feathers have the same pale buff stripe, but instead of being mottled they are barred with buff and dark brown. I have tried to show this in the illustrations: but look at the cock's wing first. This is typical in colouring. The hen's wing, although it shows the distinctive bars on the wing coverts, is that of a partridge of a beautiful pale grey—a rare variety which I thought would make a more interesting drawing than another wing of the same ordinary colouring as the cock's.

The drawings, of course, are of the wings of the common grey partridge. The French or red-legged partridge is a different bird altogether, handsomer and brighter in colouring, with a red beak, grey gorget fringed with black, side feathers of the breast and belly barred with black, grey and buff, and, of course, red legs. You can tell the cock from the hen by a knob like a



Wing of cock partridge, showing buff longitudinal stripes on median tertiary feathers.

rudimentary spur on his leg. And you can tell the English partridge from the Frenchman, when you cannot see him, by his call. The English partridge's cry is creaky, like screwed wood or metal —Tennyson writes of the partridge turning his "rusty key." But I always think its old English name "ptyryche" represents its call as nearly as any sound that can be put on paper—only by a coincidence, of course, for the name derives through French from the Latin. The French partridge's call is quite distinct: "Chuk-ara-kar" is somewhere near it.

The date of the introduction of the French partridge into England, by the way, which until a short time ago was only vaguely known, was definitely settled by a discovery communicated to the *Field* by Lord Leicester on March 19th, 1921. Lord Leicester had been sent copies of two letters which had been found at the *Bibliothèque National*, one from Favennes de Mouchant, gamekeeper to King Charles II., and the other from Charles Colbert, Marquis de Croisy, Ambassador from Louis XIV. to Charles II. The first asked, and the second granted, permission to take *perdrix rouges* in the park or neighbourhood of Chambord. These letters are dated in the autumn of 1673, so that French partridges have now been acclimatised in England for just 250 years.

Years ago many gamekeepers used to dislike the French partridge and asserted that it quarrelled with, and drove away the grey; but there are no grounds for this, and to-day the French

birds are even welcomed on driving shoots, on account of their habit of running forward down the drills, and rising singly in different directions. The Frenchman is also welcomed as he comes forward to the guns, for he flies as straight as a cricket-ball instead of swerving. It is well when he is the first bird to come over a gun who needs confidence.

The test of old and young partridges early in the season is simple enough. A "cheeper" or "squeaker," of course—a bird too young to shoot—is obvious. But early in September the young birds may be full grown, and the test then is the feet and legs, which in young birds are yellow and in old birds grey. The yellow gradually gives place to grey, and by December it may have vanished completely; but for some time after the legs have turned grey the undersides of the toes are still yellow.

Partridges pair at different dates according to the season. In a mild winter the coveys break up in January, and you may see the cocks fighting for their hens before February brings the shooting season to an end. Many men will not shoot after the birds have paired, and, indeed, it is only natural and humane to leave the cock and hen alone when they have chosen each other. But if the weather remains hard the coveys may remain together long after the season has ended; and frost and snow will sometimes bring the coveys together again after they have begun to pair. The process of pairing is by no means accidental, for partridges fall in love with one

another just as human beings do, and cannot be forced to mate anyhow, as people have discovered when they have placed cocks and hens together in enclosures with the idea that any cock would go with any hen. Of course it often happens that two or more cocks may want the same hen, and you may then watch the cocks jumping and sparring at one another while the hen waits near till her fate is decided. But these battles, though they look fierce enough, do not last long, and end in the weaker bird being chased off the field to look for the next best mate elsewhere.

The birds choose the neighbourhood where they mean to nest, and the first egg—pale olive brown ; the French partridge's is speckled buff—is laid about the beginning of May, seldom as early as April. The nest is little more than a hollow with a few grass bents and dry leaves, and, as the leaves resemble their surroundings and often cover the eggs, the nest is not always easy to find. It may be anywhere in the rough herbage of a bank or hedge, the outskirts of a wood, under brambles, in tangled grass or rushes or fern, or even in the middle of a hayfield or such a crop as sainfoin. This means, of course, that many nests are cut out by the machine ; though a keeper, going in front of the machine may be able to save some, and the experiment has been tried of taking the machine into the centre of the field and cutting a gradually enlarged circle from within. In this way, if there are young partridges or pheasants running in the grass, they will have a better chance of escape ;

they are pushed further and further from danger as the mother takes them away from the sound of the knives.

A partridge lays from twelve to twenty-four eggs, and as many as thirty-six eggs have been found in a single nest ; but in this case probably there were two or more hens laying in the same spot. Partridges and pheasants, too, will occasionally lay in the same nest. A partridge sits as a rule for twenty-one days (a pheasant, generally, for twenty-four), but occasionally the young birds are not hatched off until the twenty-third day. All through the time that the hen is sitting the cock stays somewhere near, and when the little birds are hatched out he takes his share in brooding and sheltering them and finding them food. But it happens, unluckily for the young birds, that the whole process of hatching out and the life they live soon after being hatched is one prolonged series of risks. It is this that makes the shooting season so uncertain ; and it is to lessen the risks that different systems of helping partridges with their nesting operations—the " Euston " system, for instance—have been invented. To these we shall come later.

The first risk run by nesting partridges is, of course, with the eggs. A partridge's clutch of eggs may be destroyed in a dozen ways. Weasels, stoats, rats, hedgehogs, crows, rooks, magpies—all will eat partridges' eggs if they can get them. A badger on his rounds will not refuse the nestful if he finds it. Foxes are fond of eggs, especially when they are hard sitting, and it is just when

her eggs are about to hatch out that a partridge is often winded by a fox. While she is sitting and so remains motionless, she seems to cease to give off scent, but when she feels the eggs begin to chip under her, she raises herself and fluffs out her feathers, and the scent goes out from her hot body. Then comes her red-coated enemy's chance. If he is going his cat-like way by banks and rides, and that gamey smell comes down wind to him, he knows what he can get; he crouches in his tracks and follows his pointed nose. But the fox is not the only enemy. A hunting dog may blunder on to the nest; a hunting cat may look for the sitting bird.

Then comes the danger of rain storms and flooding. Most of the young partridges in the country, I suppose, are hatched off in the second and third weeks of June—and June is a month of thunderstorms. If the nest lies in low ground it may be flooded by a deluge in a few minutes. July follows June, with as many chances, or more, of storms, and when the little partridges are only a few days old they drown in an inch or two of water, or they get soaked through in the long grass and die of cold. If the parent partridges have time they will take their little chicks into shelter from the rain—even into such a place as a barn—and will lead them out to dry in the sun, on a gravel road, for instance, as soon as they get the chance. But, of course, a July downpour begins with little warning.

In all the nursery work with the chicks the cock partridge works as hard as the hen. He

waits by the nest with the hen to take the little birds as they hatch out ; he broods them with his wings, just as she does ; and he and she go off with their family when they can run, and never leave them through the year till the pairing season comes round again. If the hen is killed when the chicks are still babies, the cock will look after the family by himself ; and a cock partridge, without a mate, has been known to wait about near a coop in which young partridges have been hand-reared under a hen, and entice the whole brood to come away with him. A pair of partridges that have lost their nest or brood will often do this—that is easily understood ; but I think there is no other bachelor bird which insists on a family in this way. The cock partridge was never meant to be a bachelor ; he has a bold eye for the lady of his choice, he is an ardent lover and faithful husband, and quite devoted to children.

And now, how to lessen these risks and losses of nesting-time ? On the great majority of the partridge shootings in this island, I suppose, the risks are taken ; either it is not thought worth while to face the expenditure of time and trouble involved in any artificial system, or else it is a question of extra wages, for it is one man's whole-time job to look after a partridge beat thoroughly. But there are other estates on which every possible precaution is taken to see that every egg is hatched, that every danger that can be avoided is avoided, and that risks are spread over a long instead of a short period of time.

Before, however, we come to consider the most scientific method of increasing and safeguarding the stock of partridges on an estate, which, for convenience's sake, we will call the Euston system, let us see what can be done to assist partridges in their nesting under natural conditions.

This is, of course, in its essence a gamekeeper's job. It begins with trapping. Unless an estate is properly cleared of vermin—I hate the word, which has even been applied before now to golden eagles ; but there is no other word which covers the ground—it is impossible for partridges to increase in number. Stoats, weasels, rats—there can be no room for these. Carrion crows are nowhere anything but a pest, and there can be no mercy for them. Rooks—well, the owner of the shoot can decide. We shall come to rooks in another chapter ; so we shall come, too, to magpies and jays. Opinions differ about all three.

But there is one enemy of partridges about whom there is, unfortunately, no difference of opinion at all. Foxes are one of the greatest difficulties that the gamekeeper has to deal with. During and since the War they increased in many places to such numbers that for several years some hunts actually did not have time to kill down what they have wanted to kill. And hunting is an uncertain business. One cannot expect good scenting days and a fox to eat three times a week, and the plain fact remains that since the War there have been districts where

there have been too many foxes, and where they have done a great deal of mischief.

To a certain extent this cannot be prevented, for it is impossible to protect every nest; but there are methods of minimising losses. One which has been often recommended is to run, at a little distance from the nest, strings soaked in renardine, so that the fox shall be prevented from coming near. Renardine is a stinking mixture, extremely useful for many purposes, and is one which, no doubt, foxes dislike; but I have been told of "educated" foxes who have discovered, by accident, perhaps, that renardine means a partridge somewhere near, and who brave the smell they hate in order to find the sitting bird. A more certain method of protection is to induce the partridge, if possible, to nest inside fox-proof wire netting. Rough corners and strips of fields can be fenced off with netting of a mesh big enough to let a partridge through, but not a fox; and when the grasses and other plants spring up inside the netting, the birds soon discover their opportunity, and nest in safety.

But the Euston system is, on the whole, the simplest and most satisfactory form of protection. Roughly stated, the method is to substitute sham eggs for real in the nests for the period of sitting, and only to replace the real eggs when they are on the point of hatching. By this means you insure, so far as is possible, that if the sitting bird is killed, say, by a fox, you still have the eggs: you can extend the hatching period, so

that you do not risk all your nests and broods in the same few days; and if the weather is too bad to give the eggs to the sitting partridges when they are chipping, you can hatch them out under your own hens.

To take the system in detail. As soon as the season opens—say in the first week of May—the keeper begins to look for nests. He finds every nest he can, marks its position on a map—an ordnance map on the scale of six inches to the mile gives him room—numbers it, and notes down the date when he finds it in a book. He visits every nest every day, and when there are five or six eggs he takes them away and substitutes dummies, noting in his book the date, the number of the nest, the number of eggs taken, the number of dummies placed in the nest, and so on. As each additional egg is laid he takes it away and replaces it by a dummy, until he has given the laying bird ten dummies, when he gives no more, but continues taking the eggs. These, in batches of 25 or so, he places under sitting hens.

He thus gets batch after batch due to chip one after another, and, as he knows from his book which partridge began to lay first, and when she went down first on the dummies, he knows to which birds in order he can give the eggs as they are due. A partridge will sit a little longer than her usual three weeks on eggs that do not chip, and also she will be ready to take charge of newly hatched chicks when she has been sitting for ten or twelve days, so that a

keeper has always a certain number of nests "to play with," when he is giving out chipped batches, and he can suit the partridges to his own dates. And so, besides ensuring that if he loses a sitting bird he will not necessarily lose her eggs, he also spreads the risk of loss of his newly hatched coveys over four or five weeks instead of the fortnight or three weeks which would be the natural period if the birds were left to themselves.

This method is known as the Euston system, so-called because when it first came into general notice it was supposed to have been originated on the Euston Estates of the Duke of Grafton. I believe this is not historically a fact, but the name, in any case, is convenient, and in its efficacy it may, perhaps, be allowed to be associated, if only by a label, with that great sporting property.

We will suppose, then, that brood after brood has been safely hatched out, either under this artificial system or in the old natural way; and we will take it that the parent birds have taken their covey into the crops, the corn, the lucerne, the springing potatoes, and are busy helping them to find their food and get their living as partridges should. What comes next? What of the weeks between the end of June and the beginning of September? Is there anything that ought to be done for the birds? Is there any way of helping them, for instance, in difficult conditions of weather?

There is an old saying, of which most of us are a little tired, perhaps—partly because we

believe it to be true, but to need explanation—that no summer can be too hot or too dry for partridges. The year that is quoted in support of the saying is the Jubilee of 1887, which was a summer of drought. I was a boy at school that year, and I remember that it rained day after day till the Fourth of June, which was fine, and then we had no more rain for the rest of the half. I think that, to be exact, rain first fell in the southern counties on the fourth of August. But it was a wonderful year for partridges—the best, perhaps, within living memory.

And it may be that it was so good because up to the first week in June it was wet. The fields carried good crops, there was plenty of moisture in the soil, so that the summer heat did not parch the ground, and, above all, there was plenty of insect life. I believe that is the secret. If partridges can get plenty of insect food they do not need water, and they thrive in sunlight and warmth. But, like other creatures, they must be properly fed. If drought kills their food supply, then it is certainly true that a dry summer can be too dry for them. That was what happened in many places in the record year of drought, 1921. Practically no rain fell after the end of January until the autumn, and that meant that on certain dry soils there was very little insect life of any kind. It was the worst year for butterflies that I ever knew; it seemed as if the fields were burnt so dry that the caterpillars starved. In August I walked over some high dry ground in Hampshire and the Isle of

Wight, and I could not see a flower or a blade of green. Under such conditions partridges could not do well, and as a fact they did badly. In other parts of Hampshire, better supplied with moisture, it was a good year, but on the whole it was disappointing. It might not have mattered that June, July and August were dry, but it did matter that March, April and May were dry, too. We must add something to the old saying. It is true that no summer can be too hot or too dry for partridges ; but the dry summer must follow a wet spring.

And in such a dry summer as that of 1921 we can help the partridges by giving them water. Some people hold, and point to the waterless wolds of Yorkshire in proof, that partridges do not need to drink. But it is certain that in times of drought partridges will come to water if it is supplied to them ; they drink readily, and evidently enjoy drinking. And water can be used to help them in other ways. The experiment has been tried of spraying strips of grass and field crops in order to develop insect life in the warmth and damp. This is, of course, not an easy thing to do, but it has been proved to be successful. So has the supply of drinking water : there have been neighbouring estates on one of which water has been supplied while the other was left dry, and the stock of partridges varied with the water supply. One point is important : the water must be clean. It takes an energetic keeper to change dirty water and carry fresh ; but only energetic keepers are wanted on partridge ground.

And so we come in the end, through the thunderstorms and heat of July and the harvested, empty cornfields of August, to the great business of the year in September. And I suppose that no boy, putting his gun together for the first day among the September crops, does so without realising that there are two—or perhaps three—chief and different methods of shooting partridges. You can drive them, and you can walk them up. You can also shoot them over dogs, and dogs are almost a necessity if you are to find birds scattered over a large area of rough ground, such as the half-cultivated land on the borders of grouse moors. But dogs have largely gone out of fashion. Even before the war, which greatly reduced their numbers—for many pointers and setters were destroyed because they could not be fed—those who kept them for partridge shooting were men who had shot partridges over dogs when they were boys and who liked to keep up old customs. And to-day, with so much of the countryside changing hands, old customs have a way of dying out. Walking up partridges and driving them remain the two chief forms of shooting.

And now as regards their differing merits. There can be no question that driving provides the more difficult shooting. Indeed, I am not sure whether partridges driven late in the season on a windy day, when they are wild and wary and swerve at the sight of a gun, are not the most difficult shooting of all that is to be had in these islands. A driven grouse comes fast, and

he, too, can swerve, but his swerves are on a longer arc. He is not so incalculable a bird as the partridge.

But, with all the fascination of the difficulty of driven partridges, I like walking them up. In driving partridges you go to your stand and you stay there. You may have a wonderful stretch of country before you—a sight such as you may see looking out over the breckland of Norfolk, perhaps, or the blue distances of Salisbury Plain. But your attention is kept for the actual shooting. You cannot afford to think long or much of what lies beyond the fence, for you must be watching for what is to come over the fence.

But in walking you have time for everything you want to do. And in shooting the bagging of birds is not everything. To enjoy the day you must see and understand the sights and sounds of the open English country, and I like doing that all day long. I like the early September morning, when the dew is grey on the grass of the lawn and the zinnias in the border. I like walking to the first gate, and thinking that for the first time I am going to tread the crumbled soil between the swedes that I can see at the far end of the field, and feel the little pools of rain pour from the leaves on my boots. I like the flowers and fruit in the hedges; the travellers' joy turning to old man's beard, the bryony twining red and green and yellow on the hazel, the scabious and camomile on the headland by the stack, the blackberries hot and vinous in the sun. I like going from crop to crop, with their

different textures and different scents ; knowing by the feel of it under my sole whether the stubble is of oats or wheat ; hearing the bees humming over acres of mustard, and smelling the honey in the clover, and the bitter, intoxicating pollen of the hops. And the clover, too, holds butterflies —painted ladies darting each about her separate beat, brimstones dancing down the hedgerow and swallows hawking after them—you can hear the snap of the beak—and clouded yellows, the butterflies I love best of all, swaying on the warm blossoms. It is because walking up partridges takes one into crops such as these that I like the old ways of shooting. When you walk after partridges you get to know the heart of the farm.

Walking up partridges is a simple business, but not everyone, even the oldest and most experienced, obeys the rules. The first rule of all is silence, and it is broken every day in September by men who have shot for twenty years. It is strange that it should be so, for a good bag depends on silence, and these men know it, and talk. They even shout. When they have put up a covey they do not hesitate to address gamekeepers, dogs, and themselves in accents that can be heard half a mile away. Only a few yards away, perhaps, there are other birds, which either get up at once, when nobody can shoot, or else start running to the fence and fly over the boundary. These people are the despair of all who shoot with them, and not the less so because the kind that makes most noise is as

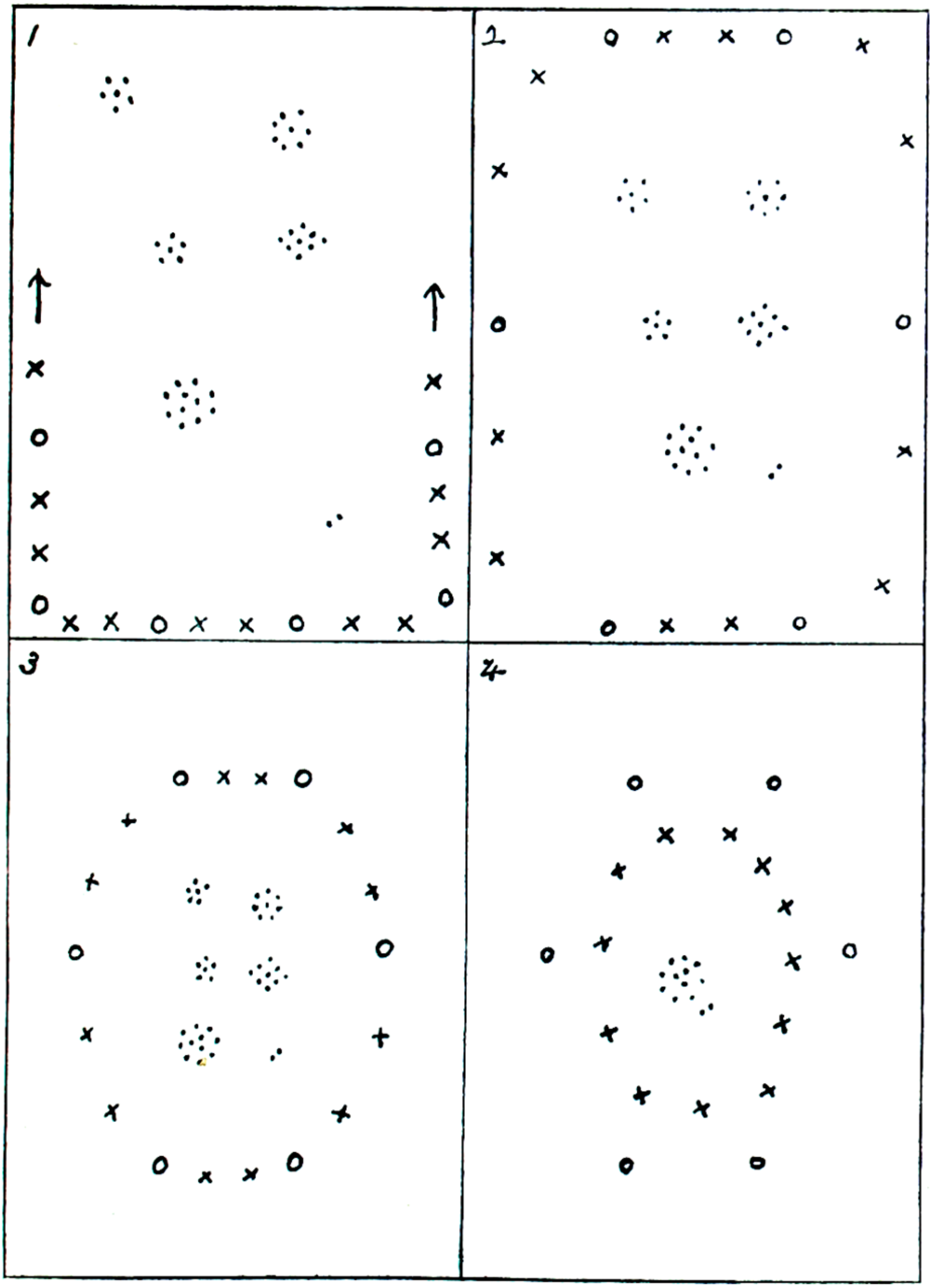
often as not cheerful and charming in other ways; he may even be your host, and there is nothing to be said to him.

Silence is the first rule, and the second is walking in line. When you are walking in line the line must be straight. If it is not straight, if one person is walking too far forward and another has dropped behind, not only does the person in front put up birds too soon, but the other behind often makes it dangerous to shoot. Guns, keepers, and everyone else ought to march as straight as a squad drilling. The only exception is when it is necessary for the gun on the flank to keep forward to prevent the birds from flying out from the side, or to flush them so that they shall fly as they are wanted towards some particular piece of cover. In this case the guns in the other part of the line have to be careful not to shoot half-left or half-right, whichever it may be.

Or perhaps I ought to add one more exception. This is involved in the process known as "half-mooning." I illustrate this process with four diagrams. Here you have a big field of roots with several coveys in it. You have a large party of guns, say six, and you want to ensure that all the coveys shall be shot at and all the guns get some shooting. You begin by lining up at one side of the field, and then sending forward to the two flank guns, each with a beater in front of him to creep along the sides to the far corners. As they go along the sides two beaters follow them, then two more (you want a lot of beaters



Wing of hen partridge (a rare grey variety), showing black transverse bars on median tertiary feathers.



1. Lining the fence.
2. The coveys draw in.
3. The half-moons converge.
4. Beaters flush coveys.

O Guns. X Beaters.

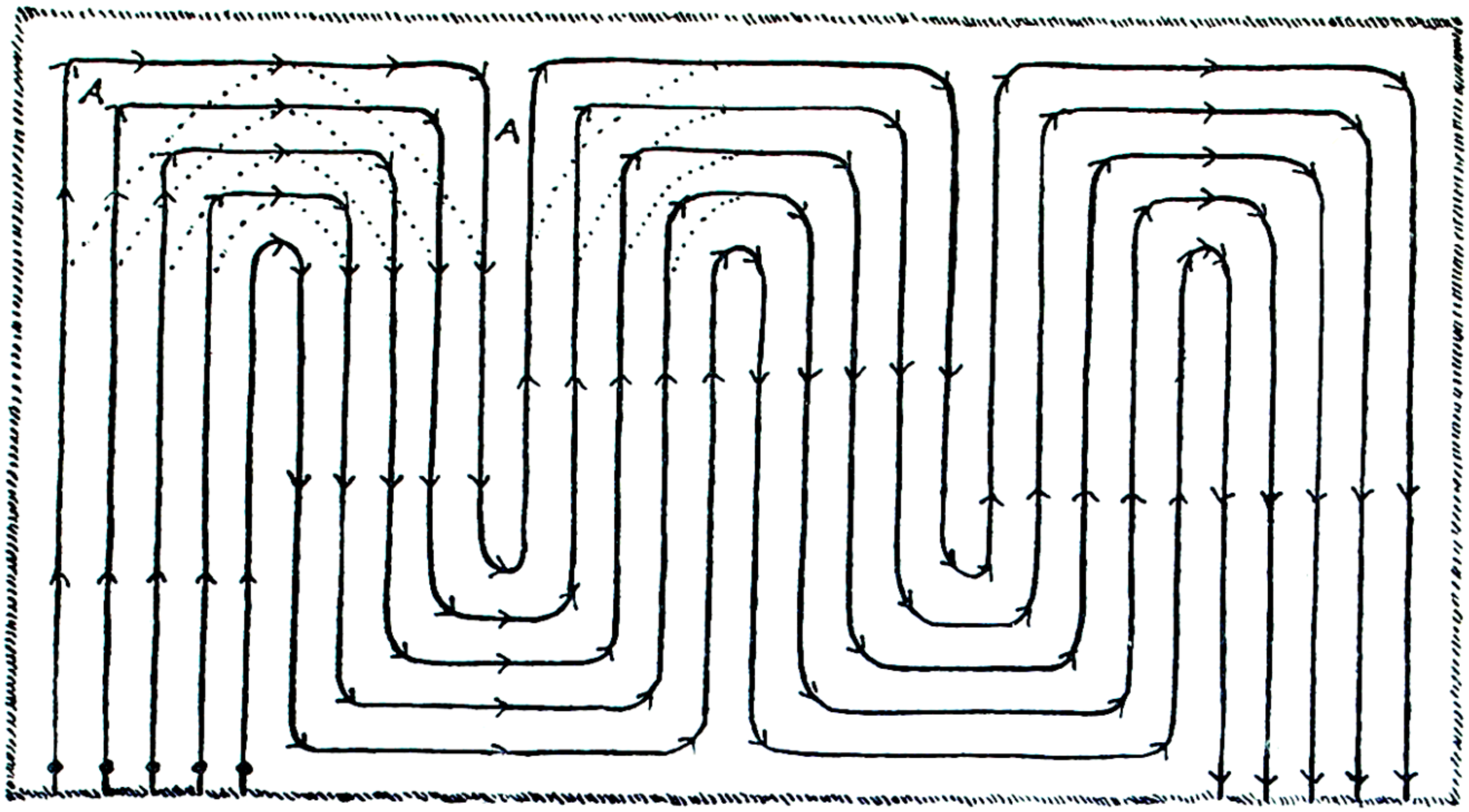
for half-mooning), then two more guns. (Diagram No. 1.) More beaters follow these, and the fifth and sixth guns remain where they lined up. When the first two guns have reached the far corners they converge, and the guns and beaters are now placed as in diagram No. 2.

Now the beaters and guns move towards the middle of the field, closing in from the corners so that the line forms two half-moons. This brings us to the position of diagram No. 3.

Lastly, the beaters converge and the guns stand still, as in diagram No. 4. The coveys, which have heard, if they have not seen, the line gradually surrounding them, will probably have run together towards the middle of the field. When they get up they have no chance but to fly over the heads of the guns.

But this, after all, is not walking up partridges in the ordinary sense of the words. And, also, it has one of the chief disadvantages of walking out of a straight line. It is dangerous. Each gun has a dozen or more angles which he has to remember are unsafe. He can only shoot at birds which are well up in the air, or which have broken over the ring of guns. An excitable shot will be tempted to fire across the circle, and I know nothing more uncomfortable than being in the company of people who look as if they were not going to resist that temptation. And for that reason I should not recommend "half-mooning" as an exercise appropriate to the elements of shooting.

Walking in line, of course, is not always a



LINE OF GUNS WHEELING IN A FIELD.

⟶⟶ Correct route of guns. . . . . Incorrect route. If the latter is followed, it will be seen that a large proportion of the field, *e.g.*, at the point A A, is not covered.

straightforward march across the breadth of a field, or a strip of crop. If the field is large, the line must wheel at each end of it, or else must drop back to the end from which it started. This going back over the ground you have just covered may seem tiresome, but in certain circumstances, when, for instance, you must push the birds in one direction only, it is absolutely necessary. When it does not matter which way they fly when they are flushed, the wheel goes on with each flank in turn stopping for the line to pivot on it, as in the preceding diagram.

Two points need noticing. One, that the flank gun on whom the line pivots must move a few yards inwards as the line turns, otherwise he will merely walk back on his own tracks, without the likelihood of flushing another bird ; the other, that the flank gun on the outside of the wheel must not cut the corners, but move carefully to the end of the field before turning, otherwise there will be left quite a considerable space, particularly if the line is a wide one, over which no one will have gone. When birds are lying close, this may mean walking by a covey altogether.

And just as there are men who have shot all their lives who insist on talking loudly when they ought to be silent, so there are others who year after year spoil the wheel, always in the same way, by pressing on ahead without noticing what the rest of the line is doing. They spoil the object of the line, for not only do they put up birds out of shot for others, but they put up

birds on each side of them which fly out to the sides, so that the effect is that the coveys are driven in every direction, which can never be right. Like the man who talks, the man who spoils the line is frequently otherwise a delightful person. It is a deplorable situation.

Walking up partridges may call for strategy as well as tactics. For in practice, it happens very seldom that you can walk a field in any direction. As a rule, especially on a small shoot, it is supremely important to push the birds in one particular direction. If they cross the boundary they may be lost to you for the day, and if you flush them so that they can see no cover near them in front, they will either swing away to the left or right or fly on possibly out of sight. And nearly always what you are trying to do is to get them down into cover where you can walk up to them again. When you start in the morning, for instance, the coveys are very likely out on the stubble. Your object will be to walk towards them, or to show yourself at a particular point—this is often quite enough when the birds have been shot at and are getting wild—so that they will either run or fly into whatever cover you intend. And if cover is scarce, as it was, for instance, in the drought of the year 1921, this may involve quite considerable planning, with alternative schemes if the birds take their own way instead of yours, or if the wind makes it impossible to take a field in the direction you had hoped for. But this is a part of the fascination of the sport. Many men can shoot well,

but it is not everyone can plan a day's shooting.

Two or three things you will learn by experience. One is whether in crops such as swedes or potatoes you should walk across or down the drills. If the crop is thick it does not matter; if it is thin you may find you cannot get up to the birds except by walking across the drills. Potatoes are a horrid crop to walk either way, and you will see more bad shooting in potato fields than in any others, partly because the entangling haulms tire a man's legs—and no one shoots well when he is tired—and partly because the foot-hold is so uneven. And foot-work is just as important in shooting as in cricket.

Another point to remember is always to walk out a field to the last furrow. How often it happens that the line turns, or is turning, before coming to the end of the field, because the ground looks bare and empty—and suddenly the covey springs from under the very hedge! The birds have been running before you, of course, perhaps from half across the field. Or a rabbit has slunk down the furrow and has squatted. He, too, has often escaped because the gun walking down on him has turned too soon.

And when a covey rises? Do not be in a hurry. On the first day of the season, and on any day, it may be, when the birds are lying well, the covey will get up actually at your feet. If you fire at once, you will smash any bird you hit and you may miss because the pattern of your shot will be too small. Wait a moment. Remember

that you can kill any bird well at thirty-five yards, and that even forty is only a long shot. Wait till the bird you mean to fire at is at least fifteen yards away before you put up your gun. You will have learnt at the shooting school to bring your gun up on the mark, and to fire almost at the moment the butt touches your shoulder. When you fire, your bird will be, perhaps, twenty yards away: you will have chosen your second bird subconsciously as you picked your first, and if you get both, you will have killed them at a proper distance, and will have given yourself the best chance of doing so by allowing the shot to spread.

And now as to picking the right bird. This is a matter of practice. Some of the books tell you that you must pick the old cock, and that you can always tell which he is because he is the first to get up. They also tell you to take an outside bird, and by no means to fire "into the brown"—that is to say, the covey bunched together. These two pieces of advice may very well be contradictory. You may not be able to hit the old cock without firing "into the brown." Again, it is not true that he always gets up first: you will find over and over again, that the whole covey gets up practically simultaneously. Then, as they get up, you may find two or three other birds between you and the bird you believe to be the old cock; that will often be the case when the covey flies straight away from you.

To take the old cock first is, indeed, a counsel of perfection. Take him, if you can. If you

can't, or if you don't know which he is, try to take a bird which is flying apart from the rest, and if there are several, take the one which is farthest out, *so long as he is your bird.* This will give you more time for your second bird.

But what do I mean by " your bird " ? Here, again, is a matter of practice. Generally speaking, a bird is " yours " when he is nearer to you than to any other gun. But it may sometimes happen that a bird which is nearest to you will obviously make a shot for your neighbour, while you can take a bird at which he cannot fire. You will then try to leave him the bird at which he can shoot. Again, a bird may rise at your feet and fly half right or left. Do not take it if you see that when you fire, it will be about to cross your neighbour. You may think it your bird, but by leaving it you will lose nothing. One of the worst things to be said about a man is that he is a selfish shot. It means much more.

Then, as to judging distance. How far, for instance, is forty yards, which is to be the outside range at which you fire ? What does a distance of fifteen, twenty, thirty yards look like ? Twenty yards off is a distance which is not difficult to judge if you play cricket. Distances over thirty yards are not so easy to guess. But you can do something towards getting used to judging distance quickly by measuring lengths of lawn, path, and so on which are familiar to you and which you often look at, and by placing something the size of a partridge—your cap, say, or for that matter, a piece of cardboard cut to

the shape of a partridge flying—at distances of twenty, twenty-five, thirty, thirty-five and forty yards. You will be surprised at first to see how small a partridge looks at forty yards. It is by the size which a bird looks to us that, in practice, we judge distance; and the placing of objects at known distances, I believe, you will find a help.

We hope, all of us, to kill our birds dead. But we cannot always do so, and during a day's partridge-shooting there are pretty sure to be two or three birds which are only winged, and which, when we go to gather them, are found to be "runners." We want, of course, to pick a runner up as quickly as possible. But this is often a difficulty. If it is a strong runner—if the wing is just broken at the tip, and the bird is otherwise unhurt, it may have a run a hundred yards or more down a drill before you even come up to the place where it fell, and it may be out of the field, or in a far hedgerow, while you are looking for it; so that the dog trying for the scent will have to run a long distance, there will be much blowing of whistles, and almost certainly someone will shout at him. This means that the remaining partridges in the field will either run out of it, or will be put up by the dog running into them; which will also confuse the dog. There is nothing to be gained by all this.

The better plan is to decide from the beginning that you will not spend a long time looking for the bird if there is a long piece of the field in front of you. If the dog cannot find the bird

quickly, that means, probably, that the bird has already run some distance. Drop a handkerchief where the bird fell, and walk out the rest of the field. You can then come back and can spend as long as you please, or as long as your host pleases, in searching. He, if he is a merciful man, will not rest until he has found the bird; and you, to help him, will do what not every guest does when he has a runner down—you will stand still and let the dogs work by themselves. Unless you can see the bird, you have no means of finding it, while they work with their noses, and do not want to meet everywhere the scent of the dubbin on your boots.

Years ago, before the Röntgen and other rays brought new possibilities into photography, there used to be many discussions at shooting lunches over the causes of "towering." A bird which towers—it is a quite unmistakable thing, and a strange sight when you see it first—is one which you have shot at, probably, at some distance when it is going away from you, which checks in its flight, flies slower and slower, and then rises straight into the air and falls stone dead. Some people used to argue, before the cause of towering was known for certain, that the bird, because it was shot while going away, must have been hit in the spine, causing some kind of paralysis. They pointed to the fact that the bird seemed to be unable to control its muscles, and also was nearly always found lying on its back. But W. B. Tegetmeier, of the staff of the *Field*, proved by dissecting a number of

towered birds sent to the *Field* offices, that in such cases the bird was shot in the lungs; and later, the Röntgen rays confirmed what he wrote, showing the course of the pellet embedded in the lungs. What happens, then, is clear: the bird, finding the air passages choked, throws its head farther and farther up and back, its flight follows the head, and it falls over backwards. But it is not the fact that a towered bird invariably falls on its back. You will sometimes find one, with its wings outspread, on its breast.

This is what some writers have called the "true" tower, distinguishing it from a so-called "false" tower, in which the bird, grazed on the head by a pellet, rises into the air and falls, but recovers, either on being picked up or before it can be picked up. But I do not know why this should be called "towering" at all. The bird with a grazing wound does not rise to the same height, and falls in any position, not with its wings outspread—or that, at all events, is my experience.

So much for walking up partridges; and if you try to find the difference between the shooting you get when walking and driving, you will find it quite simply in the greater difficulty of hitting driven birds. If you can do well with driven partridges in a high wind you can hit anything.

But there are difficulties which come before the actual shooting. The first and obvious object in partridge driving is to get the birds to fly over the guns. And it is strange how little this object is sometimes studied, even by men who

have been shooting all their lives. If they do not tell you so in so many words, they make it clear by what they do that they believe that partridges can be driven anyhow, anywhere, at any time, by anybody. For this reason their bags are small.

The first rule in partridge driving is the same as in walking up—silence. The guns should be placed silently. They should be silent when going to their places and silent when they get there. The keeper should be silent, the beaters should be silent. But seldom, of all these, can we say more than "should."

And the second rule is, for the guns, invisibility. If partridges see the guns take up their places they will not fly over them. If they can see them as they are flushed they will swerve to avoid them. The swerving partridge is difficult, but worse is the bird at which you cannot shoot at all. And it is the guns themselves, often enough, who spoil their own shooting.

To begin with, they talk when going to take up their places. As they walk along, they discuss the weather, foxes, the Cambridgeshire, golf, heedless of the fact that they are passing down a road or behind a hedge, adjoining the field which birds are to be driven over them. Arrived at their places they cough, borrow matches, talk to loaders, address dogs. The partridges, listening, run from the noise, and when the beaters flush them, break back over their heads or out at the sides.

It is obvious that all this ought not to happen, that it is absurd that it still does happen. But

let us take it for granted that the first difficulty, unnecessary noise, is removed and see what others remain.

In driving, more even than in walking, you need a plan for the day. The essentials are simple; cover into which birds can be driven, and cover behind which the guns can take their stand. But the cover for the birds must be well placed. It is little use to you on the boundary, for you cannot put birds into it without the risk of sending them over, and you can only drive it one way. If you can get a field of roots in the centre of your shoot, with a good fence round it, you are fortunate, for you can then drive in the fields from the boundaries, and can place your guns on any side you choose, or along each side in turn, and when you have beaten out the field one way, you can bring the birds back again.

But you will always have the wind to consider. Partridges will not face a very strong wind, and though a covey, which has been flushed, will always try to get back to its own ground, it is quite possible for birds on the wing to be flung so far in a gale that they never find their way back again. This is particularly the case with birds that have been once driven and are flushed for the second time in the day. The general rule holds good, in a day of light winds—to drive them first down wind, and back against the wind, for then they will be flying home. But in a high wind you will not get them twice over the guns the same day. They will find their way back eventually, but probably by running.

In a cross wind the down wind flank of the beaters' line will be thrown forward, and a gun will be needed, too, outside the down wind corner of the field, so placed that he can take birds breaking out at the sides. If the lot should fall upon you to be that gun, be grateful to fate. And begin watching the fences without waiting for the keeper's whistle in the distance to tell you birds are coming. If it is a big field they will very likely sweep over that corner before he sees them.

In a day's partridge driving, before starting off, the usual custom is to draw lots for places. The host then tells you whether you are to move up one or two places after each beat. It is simplest to move up one, though even then it is astonishing how many men forget what their number ought to be. But it may happen that your host may know that in certain drives the flank guns will get little shooting, and he may then decide to tell you to move up two, so that no one shall be flank gun twice running. Suppose, then, that there are seven guns, and you begin by drawing place number 4—the left-hand gun being number 1—your places for succeeding drives will be 4, 6, 1, 3, 5, 7 and so on.

The distance at which the line of guns stands from the hedge or fence, will vary according to the height and nature of the fence. If it is high and thick—a belt of firs, for instance, than which there is no more delightful screen for a partridge shooter to gaze at—the guns will stand well back, perhaps twenty-five yards away, The birds will come high, and for that very reason the guns

must not be too far out, otherwise if the covey swerves back the guns cannot reach it. Generally speaking, it is better to be too near the fence than too far out. A belt of firs is perhaps the ideal fence, and with other fences you will have to stand closer and closer in, according to their decreasing height, until, with a very low hedge, or perhaps a stone wall, you may have to stoop with your back to the birds, and only take them when they have passed you. With these fences, partridges often fly so as only just to clear them, and you will feel the rush of their wings as they swish over your head. But stooping makes for discomfort, and even for poor shooting; and the pleasantest kind of driving is when you can get that most sporting of chances, a right and left at partridges coming towards you and over you, high and small.

In absolutely open country—such as Salisbury Plain, for instance—it may be necessary to put up screens for the guns—brushed hurdles, for instance. But in these cases, it will be necessary for the screens to be in their places for a long time before the shooting, so that the partridges may get used to them. There is a portable screen which is sometimes used for these open situations, and which was, I think, designed by the late Sir Ralph Payne Gallwey. It is made of two pieces of canvas cut like fore-sails, with the two shorter sides joined at right angles and fastened to a pole. This is stuck in the ground and secured by guy-ropes, and the shooter stands in the angle, free to shoot on either side of him. The

canvas is painted dark brown and green at the top, lightening to pale colour at the bottom, and the shooter looks through small peepholes at on-coming birds or rabbits. Any boy could make such a screen.

There is one temptation which partridge-driving offers to a beginner, and which he must by all means avoid. Or he will learn to do so, perhaps, by unhappy experience. That is "browning" a covey, or firing in a vague and general way at what appears to be a thick bunch of birds of which you think you cannot help hitting one. This is a temptation which certainly occurs, too, to the beginner in walking up partridges, but in a less insistent form, for generally the birds are sufficiently separate as they get up, for individual birds to force themselves on his eye. But in driving, a covey sweeps over the fence at such a pace, and apparently so close together that the beginner thinks he will have no time to pick a single bird and had better fire into the middle of the covey. And, having done so, he finds almost invariably that the covey flies on without a feather being touched, or worse, that a bird flinches slightly, but gets away with the rest.

What has happened? This. The birds are not really very close together. There are spaces of cubic yards of air between them, and it is into those spaces that you shoot. If you do not pick a bird—if you are not looking at an individual bird as you pull the trigger—what you have really done, is to pick an empty space

and look at that, and when you fire you will hit it. A stray pellet may strike a bird, but you have aimed at blank air, and if you are any good at all, you will get it every time. If, on the other hand, you pull down a bird when you brown a covey, all that you have really done is to miss what you aimed at.

It is because of this very difficulty of quickly picking an individual bird out of a covey that comes swerving and screaking, with birds crossing one another and arriving from unexpected directions, that driven shots at partridges have a fascination greater, I think, than anything in shooting, except the fascination of driven grouse. Shooting driven partridges is like playing first-class bowling; each on-coming bird, like each approaching ball, is different, and you have to decide in a moment how to deal with it, with your brain, your arms, and your feet working perfectly together. With a drive just over, and with the memory of two or three rights and lefts running, when is the world a happier place?

And yet—there is that evening of the thirty-first of August. There, in the familiar fields the next morning, wait for you the wide, pale acres of stubble, the shocked corn dotting the hill, the promise of root-fields never yet entered—and the touch of the gun on your arm for that first day of the year. If Jupiter would bring back the years! I know which form of partridge shooting I should choose first to-day. But a boy, in any case, will come each year first to the other.

CHAPTER V.

PHEASANTS

AFTER partridges, pheasants : and I daresay that to many boys pheasants seem to come first. To me, at all events, pheasants were familiar birds long before I saw a partridge shot ; and that was because I used to watch the keeper go the round of his coops long before I was allowed to walk by my father's side when he was shooting in September. But pheasant-shooting must come second in almost everyone's case, to partridge-shooting ; for I suppose few schoolboys fire their first shot in the winter holidays.

Years ago, in what may be called the pheasant era—when pheasants were bred in hundreds on most estates and in thousands on many—not so much was generally known about their natural history as is known to-day. People who studied facts at first hand, of course, had found out the truth for themselves ; but others were content to repeat or to copy what was told them or what they found in books, and one of the traditional things to say about the hen pheasant was that she was a bad mother. Whether this was due to the fact that a hen being kept in captivity

had no incentive to make a nest, or whether a bird which mated with any cock instead of pairing like a partridge, was supposed to be incapable of the domestic virtues, or whether she was supposed to look after her chicks badly because she was given no chance of looking after her eggs, I do not know. At all events, it is not true that the hen-pheasant is a bad mother; on the contrary, she is a very good mother indeed. Those who have had pheasants' nests where they can watch them day by day, know how persistently a hen will sit on her eggs through downpours of rain, and how fiercely she will fight to defend her chicks. Haymakers scything grass will tell you that hen pheasants will fly out at them if they come near a brood, and I myself had a hen that attacked in turn a dog, a child, and a postman on a bicycle, simply because they passed by near her brood; and later, when the chicks were older, she tried to beat off a stoat or weasel—I could not see which in the long grass—that had seized one of them. A friend of mine on another occasion was walking round a field when he saw that his dog, a spaniel puppy which he was training, had pounced on something, and on going up found that it was a hen pheasant, which was covering her brood with her wings. She had chosen the risk of being killed—which she would have been had she been pounced on by a fox—rather than leave her young.

The real fact is not that the hen pheasant is a bad mother, but that young pheasants are

difficult children. They have not the same instincts as young partridges, who keep close to their parents wherever they go. They are wilder, they like to wander: they follow their mother in a more haphazard fashion. They get into difficulties with obstacles such as fences and wire netting, through their habit of flying up and perching; young partridges keep to the ground, and close to each other, but a young pheasant may fly up and come down on the wrong side of a fence and so get lost. The percentage of losses among young wild pheasants, apart altogether from losses of nests of eggs through foxes, badgers, and so on, I daresay amounts to 60 or 70 per cent.—perhaps more.

All the more remarkable, therefore, is it that the wild pheasant flourishes as he does. During the war people had an opportunity of realising how well he got on when left to himself, even when his natural enemies—jays, magpies, crows, weasels, foxes and the rest—were left to multiply unchecked, because the gamekeepers had gone to France. It was prophesied that he would vanish altogether. There were writers who pointed out that if it were not for hand-rearing the pheasant would long ago have become extinct. And then, when the war came to an end, the prophets discovered that it was they, rather than he, whose occupation was gone. All over the country there were wild pheasants. There was nowhere, of course, a stock to be compared with the numbers of hand-reared birds we had become accustomed to before the war, but

I believe that it was actually true that there were more wild-bred birds in English woods in 1919 than there were in 1914. One of the reasons, no doubt, was that they had been little shot at. But the main reason was that wild pheasants are hardy, pertinacious, cunning and prolific birds, fit to survive. And why, considering the fact that they had survived in this country since the days of the Romans, the prophets should have prophesied that without hand-rearing they would die out, remains a problem.

And what of shooting wild pheasants? Can one say that they give as good sport as the pheasants of the rearing-field? It depends, perhaps, on what you are hoping for. Personally, I do not think there is anything more delightful than a certain kind of day that I associate with wild pheasant shooting. But please observe that it is a "day." And there are other reservations to be added: there must be certain conditions of time, place, weather.

If I am to choose the ideal day for wild pheasants, it shall be in October. It is a day of calm sunshine, but with a touch of cold in the shade. There has been a frost in the night, and the lawn grass and the phloxes in the border are grey with dew before the sun touches them. The wood beyond has taken autumn colour; the beeches are copper, the oaks a rusty brown and in the elms, still green, there are big splashes of yellow like patches of light through a church window. Over the elms, and the hedges below them with their clematis and bryony and ash

stems already naked, the sky has the blue of a north-west wind.

We are to shoot the rough hill below us. It is a field gone wild—a field part open, rabbit-cropped turf, part heather, part gorse ; there are dells and hollows tangled with fern and bramble, and groups of birch and seedling Scots fir. Blackberries are hot in the sun ; here at your feet a red admiral sidles over scabious and a small copper glints on a fern-frond. From an oak above the fern an acorn drops with a plop into drifted leaves.

That is the setting—sunshine and colour and quiet. And we are to beat out the bramble and bracken : we take our stands in open spaces among the gorse along the bottom of the field, and the keeper puts the spaniels into the under-growth at the top. One of them, we know, hunts mute ; the two others give tongue excitedly if they get the scent of game, so that, although we can only now and then catch sight of the brown or the black-and-white, we know pretty well how the hunt is going, and we move along from one opening to another as we hear or see the dogs. There is a fluster near the hedgerow, followed by quick wing-strokes, and a cock pheasant comes sailing out over a group of birches—not a very exacting shot, perhaps, but it is satisfac-tory to see him crumple up as he should and crash into the high fern behind us. He is followed by another, then by a hen, then there is yelping from a clump of gorse, and a rabbit scampers out and turns a cartwheel in the open—shot

through the head. And we come to the end of the field with, perhaps, half-a-dozen pheasants, as many rabbits, and a single partridge—one of two which gave a delightfully unexpected chance near the finish, and dropped to a second barrel as he topped the fence for the next field.

We go on by other fields and fences : we have a rough strip of swampy ground to get through, where we hope for a chance at snipe, and after that two small shaws of oak and ash, which are part of the "outsides," away from the main coverts in the middle of the shoot. And going from the swamp to the shaws we arrange a small partridge drive across two or three fields, which yield not only the expected two or three coveys, but a stray cock pheasant getting up out of a hedge-row, which comes forward not very high up, but too fast for one of our party, who fires behind it : he is deceived by the pace after the slower birds of the rough field, for this bird is an old cock which has been two hundred yards on the wing and has had time to get up his full pace. You realise, as he glides down to the wood behind, how much faster the bigger bird is than the smaller, swerving partridge.

Wild pheasants shot in this way, with a pleasant haphazard in the taking of this or that beat—when they are only part, that is, of a mixed bag, or when we are merely out for a walk with a spaniel or two—make for delightful days which we remember year after year ; days of harvested crops, ripened fruit, fields newly ploughed, hunting in October sunshine. But wild pheasants

as the whole object and product of a season's shooting: pheasants bred wild and left wild in covert and then pushed out of covert to fly when and where they please—that is a different matter altogether. They may make a day's sport of a kind. But they very seldom make good shooting.

For the fundamental fact that has to be remembered in dealing with pheasants, whether they are wild or hand-reared, whether you are trying to find a single bird in Connemara or know where you can walk up to a hundred in Hertfordshire, is that a pheasant will not use his wings if he can help it. He prefers to walk rather than run, and to run rather than fly; and if he must fly, he does so with the object of getting as soon as possible on his legs again. And so, when you have a number of wild pheasants in covert, and you set about beating them out of it, what happens is always the same. The pheasants realise that something strange and probably dangerous is happening, and they decide to run away from the danger. You can see them doing it if you are walking with the beaters; they stand with their heads up listening, and then scud away, stooping under boughs and hiding under bushes; the unaccustomed noise of the beaters' sticks comes to them again, and on they go again, running, stooping, stopping to listen, running forward again. And when they come to the edge of the wood, they would still run if they could—you can see them start running till they realise the near danger in front of

them—but they catch sight of the guns waiting, and they take to their wings. Even then they do not try to fly high or far ; their sole idea is to get away to a place of safety, and so they fly, each as he thinks best, to a distant hedgerow or another covert, or back, perhaps, over the covert from which they came. They fly, in fact, in all directions, and low. Here a bird skims a few feet off the ground between you and your neighbour, and you cannot shoot until he is well clear of the line ; here another comes straight at your head, rises as he finds you close to him, and as you turn round to take him behind you, what you see most of is his tail.

Of course, things are sometimes better than this. It may be possible to beat out wild pheasants from high ground over a valley ; or you may find in your coverts wild birds which have come from a distance, and which will start to fly back to where they belong—you can sometimes get a very high sporting bird that way. But, taking wild pheasants in general, that is the truth of the matter ; they will not fly unless they must, and when they fly they are as often as not hardly worth shooting at.

Then what is the difference between these wild birds and those that have been hand-reared ? In a few words it is this : that hand-reared birds properly managed can be made to fly, within limits, where and how you want them to fly. You can get them to fly far and fast, and, if you have the ground, you can put them over the guns as high as you like. Even in the flattest

country you can get good birds if you go the right way about it, and when once you have seen it done, and have watched bird after bird sail out over the tops of the trees to the covert towards which it has been planned they shall fly, you will never want to go back to the old-fashioned push-them-out-anyhow methods which belong to the days of pheasant-shooting before it was understood.

For there is a single principle underlying the whole business of covert shooting, which is this: A pheasant will never fly well away from his home, but if you flush him at a distance from it he will do his best to get back to it as soon as possible, and will fly over all objects which lie between it and him. And his "home" is, of course, the place at which he is accustomed to be fed. In a certain ride in a certain covert, day after day through the summer, he has heard the keepers' whistle, and has known that it means grain being scattered for him. He regards the neighbourhood of that ride, therefore, as the place where he naturally should be, and though he will wander far from it by day, looking about under the trees and in the hedgerows and fields for acorns, blackberries, snails, seeds, and so forth, he will come back to it when he hears the whistle, if he is hungry; he will probably roost in the trees near it, and he will think of it as the place to which to go if he should find himself obliged to fly when at a distance from it.

So that in the management of a pheasant-shoot the host first looks carefully at the situation

of his coverts and the lie of his ground. (I write of him, for convenience's sake, as " host " ; but he may be the tenant of a shooting, or the manager, perhaps, of a " syndicate "—a number of men subscribing so much each towards expenses—or simply the gamekeeper planning the shooting for his employer). He has decided, we will suppose, that besides what wild birds there may be left in the woods he will rear so many pheasants under hens. He has his sitting-boxes and his coops in readiness, and the first thing he has to look out for is a rearing field. This is to be a sunny grass field, if possible facing south or west, and sloping so as to be well drained, and as near as may be to the keeper's house. Then he looks at his woods. He wants, if he can get it, a good central covert ; he can have more than one, of course ; but for simplicity's sake we will take one. It should possess certain requisites. It should be sunny, and yet should be sheltered from cold winds ; it should have good trees for roosting ; it should carry plenty of natural food in the way of berries, acorns and so on ; it should have good warm undergrowth ; and it is all the better if there is a natural water-supply ; and there should be grit in the soil. If he can get all these in one covert he is lucky ; but with the first requisites, trees, sunlight, shelter and undergrowth, the remainder, food, water and grit can be supplied.

Having decided on his central covert, he next looks at whatever other woods or covert there may be. Perhaps the whole shooting is woodland,

with fields here and there among belts of trees; perhaps it is mainly arable or pasture, with scattered woods or small patches or strips of trees — spinneys, shaws, rews, are local names for the same thing. He looks at them all, and at the general lie of the land, with the idea of being able to push his birds out and away from the central covert towards some outlying covert, where he will turn them and put them on the wing, so that they will fly back home. And in flying back home, of course, they will pass over the guns; so that if he can manage to get the birds away from home into an outside covert standing on high ground, with a dip in between that covert and the central covert, he knows he will get the high birds that he wants.

We will suppose, then, that he has found and planned his rearing field and his coverts. We will now look forward to the shooting later on, and will come back to the beginnings of nesting and rearing.

The first requisite, of course, is eggs. If you are starting a shoot for the first time, and have no hen pheasants of your own available, you will have to buy eggs. You want the best, so go to the best men for them; you will find that there are a number of old-established game farms which advertise their eggs in the spring, and from any one of these—there are more than half-a-dozen between whom there is little to choose—you will get eggs which will hatch out a good percentage, say eighty-five or ninety, of

strong healthy chicks. If you write to half-a-dozen good firms you will find that the prices are pretty much the same; they may seem to you high, but eggs that do not hatch are obviously dear at any price.

And a word here about methods of pricing. You will find that the best old-established firms do not advertise the prices of their eggs. The reason is this: They know that good eggs can only be economically produced and put on the market at a certain cost. This may differ a little—it will not differ much—with individual firms; so they agree that although they will compete with each other to supply customers with a good article as cheaply as possible, they will compete only in private correspondence and not in public advertisement. If they were to advertise their prices, what would happen, or might happen, is that someone would immediately advertise eggs at a considerably lower price. He might very likely attract buyers; but they would find that they had bought bad eggs. Some of them, no doubt, would hatch, but the percentage would be poor; the reason being that these eggs have been picked up at different times and in different places by different people; they may or may not be fertile, they may have been frosted, they may have been sat upon, they may be addled. And, pretty certainly, some of them have been poached. There are always small farmers, and even gamekeepers—for there are, or there have been in the past, a certain number of gamekeepers who have been

not above picking up and selling what they may call their "surplus" eggs—and these dealers, if they can get a market, do not mind what sort of goods they put upon it. Any assistance, therefore, that is given to them means the encouraging of poaching, somehow, somewhere; and for that reason the sporting papers that publish advertisements of game eggs for sale agree with the game-farmers to give no prices.

But pheasants' eggs, too, have different values at different times. Eggs laid early in the season are the best; first, because the chicks hatched from them are the strongest, the vitality of the parent birds being naturally greater when first pairing; and second, because chicks hatched early come the sooner to maturity. Every gamekeeper likes to see his birds in full plumage early in autumn. So that early eggs command better prices than late eggs. Pheasants begin to lay about April 1st in the South of England, and later farther North; perhaps April 15th would be an average date. By May 1st, the game farmers have a good supply for delivery, and they charge, as a rule, their highest price for eggs delivered in the first week of May. Before the war this was at the rate of £5 per hundred, and the price decreased after that week by week, until you could get June eggs at as little as £2 per hundred. After the war, of course, prices went up. At one time, indeed, eggs were as much as 3s. each, or £15 per hundred; and even then, you could not be sure of a supply. But the market has gradually become easier, and after

standing at £7 10s. for early eggs, it has dropped, until within a year or two, it may be, when food prices have become lower, we shall find pheasants' eggs not much dearer than they were before all values altered in 1914.

In the case of a shoot already in running order, there may be no necessity to buy eggs. If there is a good stock of birds on the ground, eggs can be obtained in either of two ways; you can pick up eggs laid by wild birds in the spring, or you can catch up a number of wild hens and pen them. I think the latter is the better way. Not only does it save time and trouble when it comes to the laying season, but it leaves much less to chance. For if you defer getting your eggs until you can pick them up in the woods, you have first to find the nests and take the clutches, which involves a good deal of work day after day; then you have to be careful as to dates on which the different clutches were picked up, and to be sure that they have not already been sat upon; and at the end of it, all you have done is to remove eggs from one place to another. Whereas, if you have your breeding birds safely penned from the beginning, you know exactly where you are; you can pick up the eggs as they are laid in the pens day by day, and place them under hens in batches as and when you choose; you can calculate from the number of hens you pen how many birds you will have for the rearing-field; when you have caught up all the birds you mean to pen you can shoot down the stock left in the coverts as hard and as late as you please, and

still be sure of your stock for the next season ; and if you leave a number of birds wild in the woods, you can let them nest as they please and need trouble no more about them, except to pick up any eggs which may be laid in obviously dangerous spots, such as close to a right of way or on the boundary.

You can catch up your birds either towards the end of the shooting season or before it begins. The latter plan has several advantages. It not only enables you to shoot through the season without troubling about the stock left in the woods, but it ensures healthy parents. Hens kept in good large pens and well fed from November to March will lay well ; but a hen which has been picked up in February may possibly have been pricked by a stray pellet ; and if the ovary has been damaged, she cannot lay eggs. Hens, too, which are caught up and penned in the early autumn are taken from the young, newly-reared stock which has not yet had time to become wild, and they will settle down easily and quietly in the pens, to wait to be mated with cocks in the spring.

With the making of pens, we come again to questions of expense ; for in the old days they were nearly always too small, and both in beginning a new shoot or in re-establishing a shoot already provided, it may be necessary to build new pens, and with wire netting and iron standards at a high price this may be a serious undertaking. Within limits, a pen can hardly be too large. Five or six hens to a cock is the

proper proportion, and these six or seven birds need, roughly, one hundred square feet of ground per bird. A pen thirty feet by twenty feet is a convenient size; I know that many game-keepers use pens much smaller, and get good results, but I believe that they would get better with more room. The wire netting for the sides should be eight feet high, and all round the sides should be boarded up, or shielded by brushwood, high enough to prevent dogs or foxes from frightening the birds and so making them dash against the roof or sides. As to covering the pens, opinions differ. Some people prefer not to pen cocks with the hens, but to clip the hens' wings and to leave the pens open at the top, so that wild cocks can come in and out; but this must always be rather a chance proceeding, and may mean that not all the hens will be fertilised. It is much simpler to catch up a good strong cock from the coverts and pen him with his hens, and to cover the top of the pen with tarred netting. Tarred netting is better than wire, for if the birds fly up against it they will not hurt themselves, but with wire they will knock the feathers off their heads.

In a normal spring the hens begin to lay in April. Hens vary in their capacities for laying, and wild hens lay fewer eggs than birds in aviaries. A wild hen lays a clutch of any number from, say, eight to sixteen; ten or twelve is a usual number. Hens in captivity, however, will lay twenty, thirty and even forty eggs. As they are laid, the keeper collects them; he visits

the pens two or three times a day to do this, so as to leave the eggs lying about for as short a time as possible, in order that the birds may not be tempted to peck them—which they would sometimes do merely out of curiosity—and so get the habit of egg-eating.

This may mean serious trouble. As a rule, it is the cock who is the offender, in which case he can be removed and another substituted; but if it is a hen, the keeper will not rest until he has discovered which bird it is. He will watch from under cover close to the pen, and if he can be sure that he knows the bird—if he catches her in the act—he may think it best to pick her off with a rifle on the spot, for, of course when once she has run in among the other hens she becomes unrecognisable. He will remove her in any case, somehow, and he will think himself lucky, even then, if the nuisance stops. For when once a hen has introduced others to the habit of egg-eating, the habit will sometimes run through a pen.

As he collects the eggs the keeper stores them in boxes or trays, standing them on end in bran, and shifting them every other day or so. He then waits until he has enough to make a batch for sitting, and the size of his batch depends, of course, on the number he means to rear. Let us suppose that he decides on a batch of a hundred. For these he will need six broody hens, which he has already arranged to get from a neighbouring farm or some other source—possibly from poultry under his wife's care—and

he will place his eggs under these hens in sitting boxes.

I am not attempting here, of course, a treatise on rearing pheasants, but if you bring up even a few, perhaps as an experiment, you will need to know—or will get to know—a few essential facts as to hens and sitting-boxes and coops. A sitting hen ought to be healthy and clean, otherwise she will infect the young birds. Roup, scaly leg, discharge from nostrils—these are obvious disqualifications, but a keeper is lucky if he is able to reject hens which are not free from vermin. He will do so, of course, if he can, but in practice he generally has to make shift with them, and to do his best by dusting them with insect powder.

As to sitting boxes, these are usually made with six partitions, each for a hen. The old way was to have tiers of boxes along the inside wall of a shed, but it is impossible to keep such boxes clean, and the modern way is to place the sitting boxes, which have no floors, on the ground in the open. The ground chosen should be warm, dry, sheltered and well-drained, and the box should rest firmly on the soil, so as to have no cracks or draughts. A good method of making a nest for the eggs is to cut a thick square sod, and to place it with the grass side downwards, hollowing out the top side ; but some keepers prefer to put sand in each compartment and to mould it into the shape of a nest, lining it with hay or moss. And another point is worth noticing. A sitting-box must be weather-proof, and must throw off

the rain. In the best designed boxes the roof slopes down from back to front—not like a hen-coop—the reason being that when a hen is sitting her tail is higher than her head, and if the box is lower in front than behind she will sit with her head always towards the shutter in front, and so is easily handled when you want to move her off her eggs.

Since a pheasant hatches out in twenty-four days, the keeper knows that his batch of eggs will be chipping on the twenty-third day, and he comes then to the critical stage when the little birds leave the egg and can be taken with their mother to the coop in the rearing field. It is at this stage that some keepers like to have an incubator, into which they can place the eggs as they chip, and in which they can keep the little birds until they are dry and ready to be moved. Others prefer to leave everything to nature and the old hen. But whichever method the keeper prefers he will need a receptacle in which to carry the newly-hatched birds without the risk of a chill. A keeper of the old school, such as I knew when a boy, would carry these little chicks inside his flannel shirt next his body. A modern keeper prefers a box lined with felt which can be warmed with a hot water tin, in which he can place the chicks when they are dry after hatching, and when he wants to turn the hen out for food and water before taking her away to the coop.

And now, with his hens in the coops and each hen given a brood, the work of the rearing-field

begins. Not all the hundred eggs which he set under the six hens will have hatched out, so that he will not have as many chicks as he had eggs. Suppose that he has hatched out eighty-five, he will be able to give five hens seventeen chicks each, and he can choose, after watching the hens as sitters, the five which he thinks will be the safest and best mothers. For the first few days, until the chicks get thoroughly used to their mothers and their new surroundings, he will place in front of each coop a wooden run, with a top of wire netting, so that the chicks cannot get out and stray to another coop. If a hen finds a chick which she knows is not hers in her coop, she will very likely kill it. But after a few days the runs can be removed and instead of them a few branches can be thrown down in front of the coops, which will provide shade and shelter in case some bird of prey—hawk, magpie, jay or little owl—should visit the rearing-field. Every day, too, the keeper will shift the coop to fresh ground, and to do this he will need plenty of room. In putting down the coops to begin with them, he will have allowed himself all the space he needs, say, twenty yards each way between coops.

So we come to the question of food. And here I am going to prophesy. I know that for many years thousands of gamekeepers have reared thousands of birds by certain methods which have proved most successful in producing strong, healthy, well-grown pheasants. But I believe that this success has been secured by a quite

needless amount of work. The methods which keepers have been taught to rely on in feeding young pheasants have involved long processes of mixing, cooking and boiling. They have been directed towards producing a really elaborate diet, prepared with almost the same care with which a cook prepares meals for a nursery, with certain foods appropriated to certain weeks, even to certain days, in the young pheasant's progress from chick-hood to maturity. Custard, grated hard-boiled eggs, soaked biscuit meal, crushed hempseed, boiled rice, boiled groats, boiled rabbits, boiled wheat, boiled maize, different kinds of patent meals, barley meal, oatmeal, dari, rape, buck-wheat, canary—it is an immensely long list of foods entailing in all an immense amount of care and hard work in preparing and cooking. And I believe that nearly all of it is unnecessary.

For some years before the war a new method was being tried here and there in various parts of the country. It was not generally popular, for it cut across old methods, and keepers as a class are conservative men. And, like other new methods, not everything was known or found out as to detail, so that it was capable of improvement; and perhaps, because it could obviously be improved in detail, it was in many places discarded at once. But some who persisted in it, before the war, became enthusiastic over its advantages; and now, after the war, I believe it will be tried by increasing numbers of those who want to rear pheasants, and in the end will

supersede the old processes of boiling and cookery.

It is the dry-food system. Birds are fed from the beginning on certain mixtures which have been specially prepared beforehand and which contain ingredients intended to take the place of every food which young pheasants would naturally pick up when feeding wild in the fields and woods, where they do very well without saucepans and boiling water. These dry foods are supplied by more than one firm, but those of Messrs. Armitage of Nottingham are perhaps the best known. They are supplied in three different mixtures, Nos. 1, 2, and 3, No. 1 being for the youngest chicks, and so on. All that is necessary with these foods is to sprinkle them in front of the coops, and when you take into consideration the amount of labour that is saved in the use of them, the fact that they are cheaper than other foods—£5 per thousand birds cheaper, those say who have used them—and the further fact, most important of all, that young birds do extremely well on them, it is difficult to understand how any gamekeeper can contemplate going on with the old system of cooking.

The processes by which they arrive at their No. 1 mixture, which is cooked, are Messrs. Armitage's property, but they make no secret of its ingredients, which are yolk of egg, meat, ant eggs, dried flies, finely kibbled wheat, pinhead oatmeal, hemp, canary, and other small seeds. (Ant "eggs," by the way, are not eggs at all, but the pupæ of the ants—in this case, of

the large wood ant.) The dried flies are imported from Mexico, where they are skimmed off the surfaces of lakes and dried on the banks in the sun. The meat is granulated and imported from America in slabs ; and the ant eggs come from Finland. Messrs. Armitage tell me that they bought ten tons of these eggs in 1922.

Young birds are fed on this food for the first week or fortnight, and then for another fortnight or three weeks the feeds are alternated with No. 2 mixture.

The exact time for which birds should be fed on these first two mixtures and the amount to be given depend chiefly upon the rearing-field itself. If it is a field in which there is plenty of natural insect food—ants, for instance—not so much prepared food will be necessary, and the keeper can begin the No. 2 mixture as an alternative food earlier. He will be guided by the look of his birds, and by noticing whether they clear up all the food he gives them. Generally speaking, when there is natural insect food obtainable, it is better to underfeed than to overfeed, for if the birds are hungry they will run about hunting for more food. Birds always look well if they get plenty of running about, and it is a pretty sight to watch the little creatures eagerly rushing about pecking at this and that, and now and then jumping up in the air at passing flies.

No. 2 mixture is made of the same ingredients as No. 1, except that it is uncooked and contains no yolk of egg, but has an addition of linseed.

No. 3 is a mixture for half-grown birds, and for this the ant eggs and dried flies are omitted. There is also a No. 4 mixture, but this is merely small corn for covert feeding. As for the quantities of all these, much must depend on the natural food obtainable, but, roughly speaking, Messrs. Armitage recommend per hundred birds, twenty-eight pounds of No. 1 mixture, fifty-six pounds of No. 2, and one hundred and twelve pounds of No. 3.

One caution remains. For birds to do well on dry foods they must be given plenty of clean water. And the water must be really clean, which means not only that it must be given fresh every day, but that the earthenware pans from which the chicks drink must be clean, too. By the way, it is a mistake to put the earthenware pan close to the coop, for the birds will perpetually run into it, and will foul it for the hen almost the moment the water is changed. Give the hen a separate drinking vessel. Messrs. Gilbertson & Page, of Hertford, supply a cup for this purpose, which can be attached to the coop, and into which the young chicks cannot climb.

It is while the keeper is still feeding his young chicks on these dry foods before they are half grown that the time comes for him to take them to covert—to that part of the woods which from that time forward they will regard as their home. This may or may not involve a good deal of work and trouble. If the rearing-field borders the covert, the birds will take to the covert themselves; if it lies at a distance, they will have to

be taken there. This must be done by night, for the chicks can then be shut into the coops while they are under the hen ; and it must also be done while they are young enough to go in with the hen every night ; if it is put off some of them will have become independent, and will stay out in the grass. When they are about six weeks old, and can perch, the keeper begins to think of moving them ; and naturally he chooses a fine moonlight night if he can.

With floor-boards it is easy to move a number of coops in a short time ; but if the coops have no bottom, but rest on the soil, it will be necessary to slip sacking under the coops when the chicks have been shut in—an operation needing a good deal of care on the part of two men, one on each side of the coop, in order to prevent the hen and chicks from becoming frightened, or hurting their legs. Think of catching a wasp under a wineglass, and then slipping a piece of paper under the glass, so as to be able to carry him away, and you have the idea. After getting the sacking under the coop, the overlapping sides have to be turned up and nailed to the sides of the coop, and the whole thing can then be put on a hand-barrow or into the cart in which the birds are to be taken from the rearing-field to covert.

Having got his coops to the covert, the keeper places them where he wants them and leaves them shut up till the morning. In the morning he lets the chicks out, slowly and quietly, and as they fly into the wood, with the hens in the coops in the ride, they have come finally to their

home—to the place where they will be fed every day and to which they will instinctively return if they should find themselves at a distance from it—an important consideration to which the pheasant shooter will find he turns and returns again in planning his day.

In the covert, of course, they are to be as safe as the keeper can make them. If he has no foxes his work is so much the easier; but if he lives in a hunting country one of his first objects will be to get his young pheasants to go up to roost at night at as early an age as possible. Young pheasants do not always want to go up to roost—even old, wild birds do not always do so. They like to settle down for the night in thick grass or in heather; in a heather country many wild pheasants never go up to roost. But it is most important that hand-reared birds should be taught to do so, and there are various ways in which they can be encouraged. Young spruces in the neighbourhood of the coops are useful, if the branches come close to the ground; the young birds like to get up on the boughs and sun and preen themselves, and so they become accustomed to flying up and perching. If there are no low branches growing on trees near the coops, branches can be tied in position. Or the coop itself may be placed upon a raised platform. A hurdle, or flat piece of boarding, can be fastened to poles or the stems of neighbouring trees, and the coop placed on the hurdle; the young birds will then form the habit of flying up to roost at once.

Here, then, we have the young birds in covert, and the main part of the keeper's labour is ended for the year. He has still to feed, and still to watch. But, with luck, he will keep his birds, or the great majority of them—for some of the more adventurous of them will stray afield—until the day comes which is to sum up and testify to his work and skill. For the present he is satisfied ; he has reared his birds.

And now as to the cost of all this. I suppose few processes giving the same results vary more in the bills involved than pheasant rearing. It is almost true that the cost is what the game-keeper makes it. Without certain appliances, and lacking certain conditions, of course, he is powerless. He must have eggs to hatch, hens to hatch them, pens, sitting boxes, coops, a rearing-field ; but provided with these, the question of food is for him to settle in his own way, and different keepers will find different answers.

His task is made easier from the beginning if he knows that when he turns his birds into covert they will find plenty of natural food for themselves. And he will be better off, therefore, if the shoot belongs to an arable rather than a grass country. Ploughed soil produces a much greater supply of insect life than pasture. But besides insect food—which may range from wireworms and leather jackets (the grubs of daddy-long-legs and some of the *Bibionidæ*) to slugs, caterpillars, flies, and the spangles on oak-leaves—he will look out for other additions

to staple fare, such as acorns, blackberries, pig-nuts, celandine roots, and even buttercups, of which pheasants eat both roots and leaves. If he can see any or all of these, he will know that not only will his bills for corn be by so much the lighter, but that he has already in his coverts one of the best means of keeping his birds at home. For with no natural food in or near the woods, birds will wander far to find it.

But he cannot, of course, dispense with corn. And the following accounts and figures show the proportion which the cost of feeding bears to the expenses of a pheasant shoot. They are taken from the columns of the *Field*, in which they were published during the spring of 1922. Since that date certain prices have already dropped, and we may reasonably hope that they will drop further in the future.

Here are the figures of a Cheshire gamekeeper for the rearing season of 1920. Before the war he used to be able to rear birds at 2s. 6d. per head. In 1920 prices were very high, and the food account for one thousand pheasants and one hundred sitting hens came to £210 for the period May 1st to November 1st. This works out at 4s. 2½d. per bird, and may be taken as the high-water mark for that particular shoot, as prices came down by something like 30 per cent. within the following year.

But 4s. 2½d. per bird would not have been thought extravagant on other shoots during the same period. The accounts of a Rutlandshire gamekeeper, whose employer wanted foxes as

well as pheasants, for the two seasons 1920–21, and 1921–22 were as follows :

1920–21. Pheasants turned into covert 460 :—

	£	s.	d.
Rearing foods and pen feeding . . .	40	0	0
Hard corn for covert feeding . . .	121	15	6
Hire of rearing-field .	8	0	0
	£164	15	6

1921–22. Pheasants turned into covert 350 :—

	£	s.	d.
Rearing foods and pen feeding . . .	38	15	0
Hard corn for covert feeding . . .	90	12	0
Hire of rearing-field .	8	0	0
	£132	7	6

Here you get in the first season four hundred and sixty birds averaging 7s. 1½d. each, and in the second season three hundred and fifty birds averaging 7s. 6½d. each. But in these two seasons the keeper had twelve and fourteen finds of foxes on his shoot, and Rutlandshire being a grass country, there would be little natural food in the fields. That means that he had not only to know exactly where his pheasants were, but that he had to feed hard to keep them there. In fact, conditions throughout were against the keeper, and it says much for his hard work that in the first season the guns killed four hundred and eleven out of four hundred and sixty birds turned into covert, and in the second season they

had killed three hundred and thirty-two by the middle of January.

In a hunting country you cannot expect to do well with wild pheasants. In a natural pheasant country, where there is plenty of arable, things are different ; your bag for the season may be considerably larger than the number of birds reared. Here are some notes from a well-known estate in Hampshire—a great partridge country, besides providing natural ground for pheasants :

Season, 1921. Total number of pheasants reared and turned into the woods, one thousand. Pheasants killed up to end of shooting season, two thousand six hundred and seventy-six.

	£	s.	d.
Game food for rearing .	28	7	6
Corn supplied from home farm at regular prices .	70	12	9
	£99	0	3

Rabbits were used to a considerable extent for feeding the young birds, and also about £4 worth of eggs. The price of rabbits is left out of account (they are worth very little in the early summer), but taking the foods as costing £103, the average per bird killed amounts to 9d. In addition, the bag of partridges was nine hundred and ninety-four, so that it is easy to see how well supplied the estate must be with natural food.

It is interesting, by the way, to take into account a particular phenomenon of natural food which by now must be familiar to most people who own coverts in which there are oaks. On this estate in 1921 the oak trees were infested

with caterpillars, and though caterpillars dropping from the trees form excellent food for young pheasants, their presence means that the oaks bear no acorns, and acorns are good food for pheasants when they are full grown. The caterpillars thus make a profit and loss account by themselves ; but there is, I think, more loss than profit.

Here, then, we have the two extremes ; one, pheasants reared at considerable expense in a hunting country with grass fields, necessitating hard feeding in covert ; the other, an estate with plenty of arable fields and natural food. Between these two extremes of expense lie the account-books of the great majority of pheasant shootings ; most of them, I should say, as regards food alone nearer the 9d. rate than the 7s. rate. But the situation, as regards expense, could hardly be better put than in a letter from a correspondent who tested every detail of his pheasants' feeding for himself :

" Don't you think the cost of rearing a few pheasants can be just what the master and man choose to make it ? I bred 203 last year to turn in where there was a shortage, and fed regularly, but sparsely, until January 10th, once a day from November 1st. There were a lot of wild birds about which shared the feed, and the bag was 540, leaving a nice lot of hens. The food bill for the lot, from the cradle to the grave, was £12 13s. The point I wish to make is that if the stock of birds in any case is far less than the ground will naturally support, as was my case, all that is necessary to insure finding your birds when you want them is to feed very sparingly, but with absolute regularity as to time. I bought my feed from the farmers, principally wheat, at from 50/- to 44/- a quarter of 504lb. The young birds had three dozen eggs only, but the keeper killed a few rabbits for them, which being

a home product, have not been charged against them. The £12 18s. is the amount paid for eggs (hen), biscuit meal, oatmeal, wheat, maize, and barley rakings."

The point of this letter is that the owner determined to see how little food he need give. He could have given more, and would have done so, had it been necessary, but he found by actual experience that it was not. To achieve this—few of us ever do so—seems to me the last word in economy.

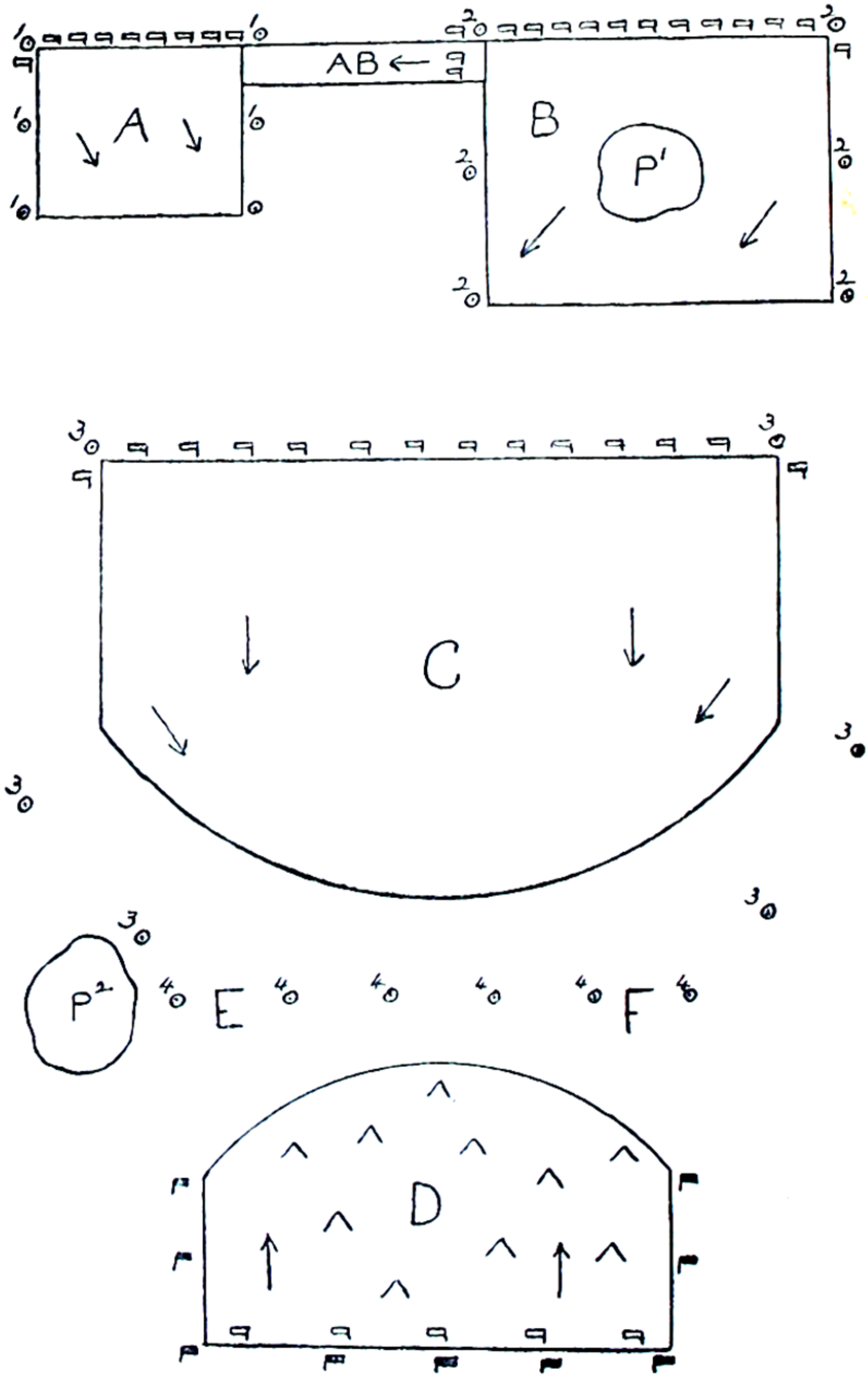
So much for the cost of rearing. We have been long in coming to an actual day's shooting. But we will now suppose that we have come successfully through the summer and late autumn; that the keeper has done as well as he expected—he never does quite as well as he hopes—with the young birds on the rearing field; that he has turned a satisfactory proportion into covert in August, and has been able to watch and roughly count them at feed in the rides; he has "listened them up" at night as the cocks go crowing to roost, and has made as sure as he can that neither a fox by day nor a stroller with a catapult by night shall lessen their number.

And now he has come to the day to which he has looked forward for so long, the day of the "first time through" the main coverts. It is a fine November morning, with a light breeze which is blowing the few remaining leaves, loosened by the night's frost, from the trees in the wood beyond the park. He was up before daybreak, posting his stops, running his lines of "sewelling," or coloured strips of flannel, and

letting down his lengths of netting which are to prevent the pheasants from running in directions in which he does not mean them to go. And now he is up at the house, waiting at the corner of the stable-yard with the underkeeper and the retrievers. He has done all he can hitherto: he is praying that no mischance will prevent him from "showing" his birds—that is, putting them high in the air over the guns—as he means to do: and if all goes well, it will be for the guns to put the crown on his year's work.

We will take the best rise of the morning as he has planned it, and will look at the details of it with one remembrance always in our minds—that he is moving the pheasants all the time with the object familiar to us, of first pushing his birds away from their home and then flushing them at a distance so that they fly home over the guns.

Look at the plan. *C* is the central covert into which the main lot of birds have been turned from the rearing field. *A* and *B* are out-lying woods, joined by a strip of covert *A B*. *D* is a stretch of ground partly rough undergrowth, partly young trees. The main idea is to push the birds in turn from *A* and *B* into *C*, then to push them from *C* into *D*, and to flush them from *D* so that they fly back to *C*. I have not attempted, owing to the shape of the page, to show the coverts exactly in their shape and position, but the general plan is clear. *E F* is a valley or rather a strip of low ground, which runs between *C* and *D*.



⊙ Guns, numbered for each beat. White flags, beaters; black, stops. The arrows show the directon in which the covert is beaten.

N.B.—The diagram merely illustrates elementary principles, and is not drawn to scale.

We begin first with *A*. There will be some outlying wild birds here, and some of the hand-reared birds which have strayed from the central covert. The beaters (marked as white flags on the plan) are lined up so as to drive the wood towards *C*, and the main line wait to move until a few of them have made good the strip of covert *A B* lying between *A* and *B*. There are six guns (marked ⊙ on the plan). One gun goes back on each flank of the beaters, in order to take birds breaking back, and the other four guns are posted so as to to take birds breaking out at the sides. Birds that cross the space between *A* and *C* are left alone; they will be flying low and we shall get them later.

Having beaten out *A*, the line is taken back to beat out *B* in the same way, one gun on each flank with the beaters and two at each side of the wood, moving down each side ahead of the flanking gun. But here, besides pheasants, there is another pleasant diversion. On P^1, which is a pond, there are known to be a number of wild duck, and as they have been kept very quiet all through the summer, it is hoped that the unaccustomed sight and sound of the beaters will flush them, when, if they behave properly, they should circle round with the idea of settling into P^2, another pond, or possibly of dropping down to the lake in the valley below. All these things happen as they should. First a cock pheasant gets up in the middle of the covert, rises as if he were going forward, swings back and comes over the beater's gun on the left,

a real good bird which he is delighted to pull down from straight above his head to the ridges of the ploughed field behind him, where it lies with its tail stuck up in the air like a quill pen in an ink-bottle. Next, there is a shout of *Woodcock!* and a brown bird slips and glances along the edge of the covert, to be dropped by a forward gun as it leaves the covert for the open. Next, a quick sound of sudden chatter and gabble in the thick of the wood, followed by splashes, splatterings, quackings and the whicker of wings—the duck are up! Here they come, strangely difficult to see till they clear the trees, strangely difficult to time for the pace of them as they swerve up at the sight of the guns and swing away on a higher curve out to the open air above the valley. But they leave a drake and a duck behind, and when they come swinging back at a noble height another falls slanting head and neck stretched downwards—dead as he crashes to the bole of an oak. Now they have broken into separate lots, circling round too high to shoot at; but here and there a pair of birds come swinging unexpectedly low, and before the wood has been beaten to the end there are nine mallard to be added to the columns of the game book.

And, meanwhile, pheasants have been flying forward, single birds mostly, and low. They are not fired at, but drop into the central covert *C*, which we are to beat out next, and to which the guns now go. Their places are marked for them by slips of paper stuck in slit sticks, so that each gun knows exactly where he is to stand.

Here, in the same way as before, two guns go back with the line of beaters, to deal with any birds which break back. But there will also be a few rabbits in this covert, and rabbits are clever at being able to dodge through a line of beaters. They are quite likely to bolt out of the covert behind the line. As to the other four guns, they go forward, two to one corner of the covert, and two to the other, to take any birds which may come over them ; but with a difference in expectation from the kind of shooting they have had up to now. For here, owing to the lie of the ground, any birds which come over the guns ought to be pretty well up. The ground slopes sharply down from the covert on three sides, and the guns at the corners are to take the birds which fly to the right and left, the birds which fly straight on to the covert *D* being left alone.

Now we are coming to the last act. The main lot of birds in *C* are pushed out over the low ground *E F* lying between *C* and *D*. Some break out at the corners, and as they are not flying towards *D* the guns take them. The beaters' guns, too, get a good bird or two, for some of the pheasants get up and swing back at once ; possibly they are birds which were beaten out at the beginning of the morning from *A* and *B*, and which are now anxious to get back again. But the main body have gone safely into *D*, and it is from *D* that the keeper means to flush them, to fly back over the low ground into *C* again, or possibly as far as *A* and *B*, in the case of birds originally driven from those woods.

The beaters are withdrawn from *C*, and the keeper takes some of them—he will not want all, so he takes those whom he can trust best to do what he wants—back to beyond the far boundary of *D*. Here he has posted a line of stops (marked as black flags in the plan), who have been ordered to keep up a continual quiet tapping on tree-stems, fencing and so on, with their sticks, and he knows, therefore, that the birds will not have run past these stops out of the covert. The undergrowth in the covert is low-cut hazel, with a few birches and oaks, and bushed up here and there with loose brushwood so as to make it possible to move about without being seen by birds a little distance off. There are one or two V-shaped spaces, too, made with brushed hurdles fastened with the hazel stems, into which birds may run, but through which they cannot pass. And along the edge of the covert nearest to *C* the keeper has run a line of sewelling—that is, a string or cord to which are tied pieces of red and white rag which flutter in the wind, and which pheasants will not attempt to pass, being frightened by the unaccustomed colour and movement.

The keeper, now, with his chosen line of beaters, moves quietly into the far side of *D*. The stops on each side of *D* keep tapping with their sticks, and the only silent side of the covert is the side nearest to *C*, along which runs the sewelling. Towards this side the pheasants, suspicious always of noise, begin to move. But they do not yet fly. Some of them run to the line of sewelling, and seeing it, run back. Others

run into the hurdled spaces, and find they can get no further. It is then that the keeper finds the advantage of having bushed up his undergrowth and brushed the hurdles. For his object is to put the pheasants on the wing only a few at a time, and not to flush them in large numbers at the same moment ; if he puts many of them in the air together, a large number will escape without being shot at. So he moves quietly about here and there, flushing his birds by twos and threes and half-dozens, and regulating the pace by listening to the guns in front of him.

And these pheasants, as he puts them on the wing, fly differently from the other birds of the morning. Up to now, he has been pushing pheasants away from the coverts which they regard as their home ; they have been unwilling to get on the wing, and when they have been forced to fly they have flown low and slow, and have dropped into covert or shelter as soon as they could. But here, in *D*, he is flushing pheasants which, when they get into the air, turn their heads for home and fly there as fast as they can, regardless of what lies between. And between the covert from which they are flushed and their home for which they are making stands the line of guns. The strip of ground, *E F*, along which they are posted lies some thirty or forty feet below the nearest side of *D* ; but, as *D* slopes up away from *E F*, the pheasants flushed from its further side become high birds at once, and when they pass over the guns are anything between twenty-five and forty yards up—all of

them good birds and some of them as good as you will see—and as high, too, as pheasants ought to be shown. For to put pheasants over the guns too high is cruelty ; men are tempted to take the highest they see, which means that these unhappy birds are merely wounded and fly on. Nobody ought to fire at a bird unless he has a reasonable chance of bringing it down dead, and, of course, it is quite possible to put pheasants over the guns so as to be out of shot.

And what is a high pheasant ? The late Sir Ralph Payne-Gallwey conducted a number of experiments to decide what a really high pheasant was, and at what height it could be killed ; and he brought together his conclusions in a book, *High Pheasants in Theory and Practice.* He summed up as follows :—

> " At 50 yards high it is just possible a pheasant might be stunned by a pellet in the head, though this is unlikely to happen. At 40 yards high a pheasant should be killed about once in half-a-dozen shots, or perhaps stunned by a chance pellet in the head. It might also, not seldom, be slightly wounded without stopping its flight. On the other hand, a low-flying pheasant crossing at 40 yards may fairly often be killed. At 30 yards high a pheasant should be killed every time, provided the aim is correct, even with a cylinder gun."

Now, Sir Ralph Payne-Gallwey was a first-class shot, he had an immense experience of game-shooting, he took months to make the trials of guns and targets which led him to these conclusions, and his opinions are entitled to the highest respect. But I have always thought that the value of this particular opinion was lessened by one consideration, and that is the type of

gun which he used. For he tells us at the beginning of the book that the gun he employed in making his tests of targets and patterns "gave a very regular average pattern of 140 in the 30-in. selected circle; which, with $1\frac{1}{16}$ oz. of No. 6, is, in my opinion, the most suitable one for a good shot to use in game-shooting." But I think most people shooting to-day would prefer a gun which gave a closer pattern than 140; they would prefer something nearer 160. That is a pattern which can be got with an improved cylinder gun, and with a choke the patterns are, of course, much closer. Few people now use full choke guns for high birds, but if a good shot chooses to do so, he should stand considerably better chance of killing a pheasant forty yards up than Sir Ralph Payne-Gallwey allows for him.

And at the end of this chapter I shall be asked, perhaps, an old question. Is this kind of pheasant-shooting "sport?" Is it sport to bring up a number of birds almost by hand, to feed them as if they were poultry, and to look at them every day in the rides, only to shoot them in the end? Well, let us face the question; it is worth answering. I do not think it is the highest form of sport. For pure sport in shooting I should put snipe-shooting, I think, first, as belonging to wild places, entailing hard bodily work, discomfort and fatigue, and needing patience, knowledge of the habits of the bird, and singular skill with the gun, to make a bag. And you cannot say all that of covert-shooting. But surely, if coverts

are to be shot at all, this is the only way. I like the casual pheasant-shooting of October, as I have said, when the pheasant is only part of a day's shooting in early autumn. But wild pheasants beaten out anyhow, or worse still, walked up, seem to me to give very little sport of any kind. Only occasionally do they offer a shot worth taking; for the most part, getting up at one's feet or flying at the level of one's head, the shots they provide are so painfully uninteresting that one even misses them—or I do, at all events—and when one hits, it is without the smallest satisfaction.

There is no getting away from the fact that covert-shooting with hand-reared pheasants is an artificial business. And when hand-rearing is carried to excess, as it was on some estates before the war, there is something unpleasant in the very magnitude of it all, in the labour involved, in the huge quantities of food handled, in the over-crowding of so many birds on a given area of ground. So, too, with days on which thousands of pheasants are killed. The idea of record pheasant bags, or of one man trying to beat his neighbour in the number of pheasants he can pay for and kill is merely disgusting; and what satisfaction can the guns themselves get out of such days? I remember a friend talking over these pre-war hecatombs, and telling me that he had sometimes come back from days when the bag had run into four figures without being able to remember a single shot. What pleasure can there be in that? But these are the faults

of excess. Covert-shooting, properly managed, need mean nothing of the kind. Numbers are not what we aim at; it is the quality of the shooting. To bring down a pheasant flying really high and fast needs a good eye and a quick hand, and not everyone can do it. This is the fascination of covert-shooting, and if pheasants are to be shot at all this is the best way.

CHAPTER VI.

GROUSE: I.—NATURAL HISTORY

THE red grouse, *Lagopus scoticus*, is remarkable as being the only British bird which is to be found in no other country. It has a near relative in Norway and Sweden in the willow grouse or ryper—the skov-ryper, properly—for the field ryper is the ptarmigan. But the willow grouse, like the ptarmigan, turns white, or almost white, in winter, and our red grouse does not.

Still, it changes its plumage. And indeed there is no other British bird whose changes and differences of plumage are so many. Not only are there different types of plumage as regards colour, but the cocks and hens moult their plumage at different times of the year. Further, the moult may be deferred by disease, so that it would be possible with, say, a hundred grouse skins, to form a series running from an almost black skin to a white-spotted buff. In the same way the stages of the moults overlap, so that in almost any month you might find birds in plumage which, owing to changes being deferred by disease, was so many months late in completing the normal summer or winter plumage.

As regards colour, the hens vary more than the cocks. Mr. Ogilvie Grant, who has made a special study of grouse plumage, divides the cocks into three main types and the hens into five. But first let us be clear about the differences in plumage of both cocks and hens at different times of the year.

There is a period of the year—roughly speaking, summer—when all grouse resemble one another; their plumage then is mainly black, barred with buff. There is a second period of the year—roughly speaking, late autumn—when the moults of both sexes have been completed and the types become visibly distinct.

Perhaps the simplest way to understand these rather confusing changes is to put it this way:

The hen wears a spring-and-summer plumage from April to July.

The cock wears a summer-and-autumn plumage from June to October.

The hen wears an autumn-and-winter plumage from July to April.

The cock wears a winter-and-spring plumage from October to June.

Or you can look at it in the form of a diagram, taking the year as a circle. (See opposite page.)

These changes, of course, are gradual, and occasionally, too, unpunctual. But looking at the calendar of plumage broadly, you can see that at midsummer and midwinter the cock and hen periods run together. At midsummer all grouse are alike in colour, and by midwinter they have separated into their types.

These types are, for the cock, three, and for the hen, five.

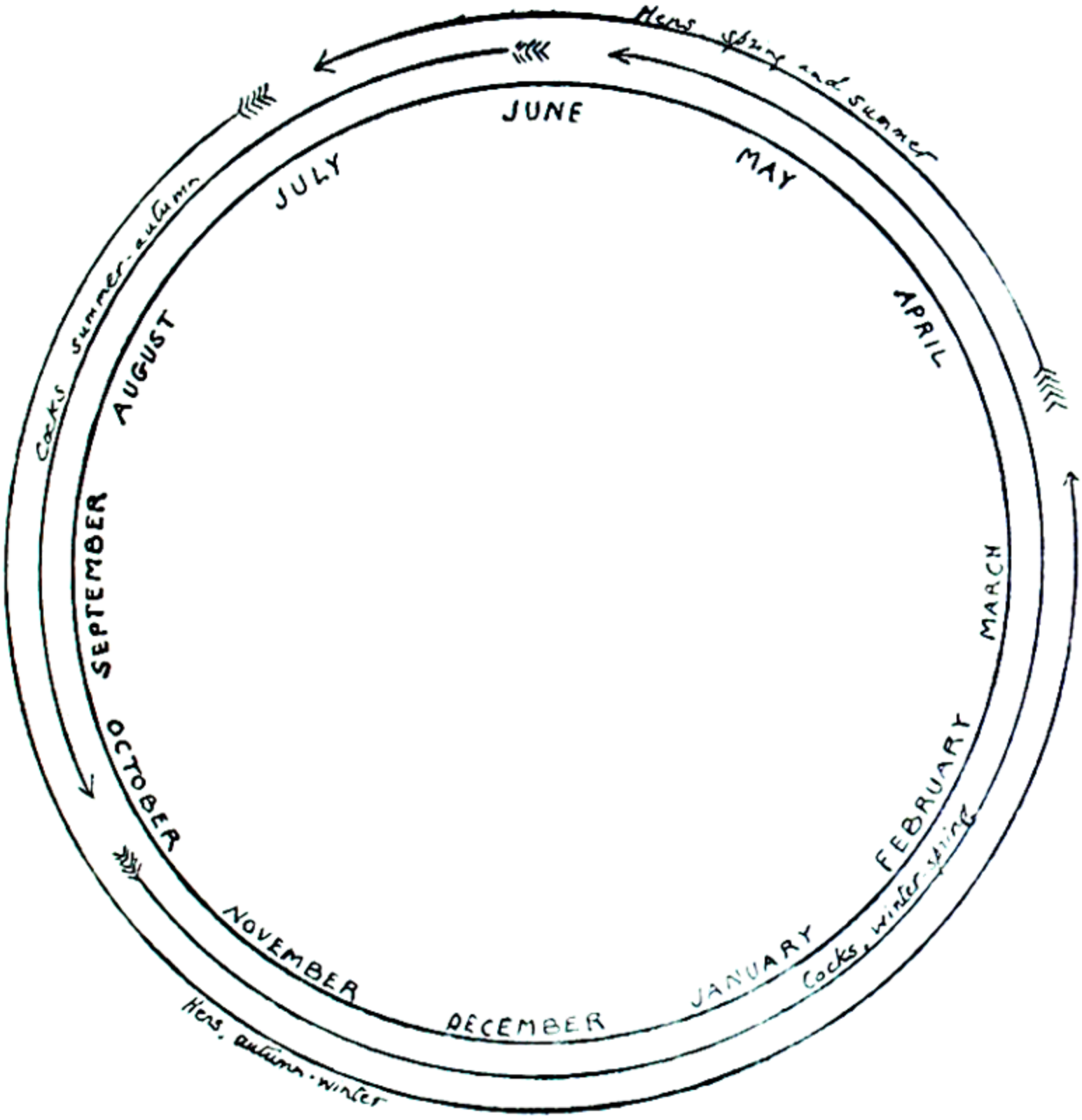


Diagram showing periods of change of plumage in cock and hen grouse.

A. *The red form.*—Cocks and hens, but commoner among cocks than hens. Generally speaking, this is a western type, from the Hebrides downwards.

B. *The black form.*—Cocks and hens, but rare among hens. This is a type widely distributed, from Caithness to Yorkshire, but, generally speaking, not western.

C. *The white-spotted form.*—Cocks and hens, and the white spotting is found on both red and black forms. This is a Highland type.

D. *The buff-spotted form.*—Only hens—the commonest form. It is sometimes also spotted with white.

E. *The buff-barred form.*—Only hens—the Irish type.

These are Mr. Ogilvie Grant's classifications, and were followed on their main lines by Dr. E. A. Wilson (Captain Scott's fellow-explorer in the Antarctic), who made an exhaustive study of the plumage of grouse for the Grouse Disease Inquiry Committee, a body of experts to whose work we shall come later. Dr. Wilson formed a theory of his own as to the curious fact that the cock and hen grouse change their plumage at different times. He thought that the cock's later date for changing into summer dress was due to the continual postponement of the change by disease. Cocks are more liable to die from "grouse disease" (that is, strongylosis) than hens; in fact, about eight cocks to one hen are killed off in an outbreak, and as this takes place in the spring, Dr. Wilson's theory was that continual outbreaks of disease (which prevent a bird from moulting) eventually caused the cock grouse to defer his moult as a habit rather than an accident. This is ingenious reasoning, and Dr. Wilson's opinion is to be respected; but I own I am not convinced. If it is the fact, it means that a process of evolution of unexampled rapidity has taken place during the last hundred

years or so. For a century ago, or even less, when birds of prey were much commoner than they are to-day, the balance of wild life in Scotland was very different, and grouse could not multiply as they do to-day. Disease, therefore, which is mainly caused by an insufficient food supply in overcrowded areas, did not occur to the same extent, and certainly did not affect large areas of grouse ground year after year. So that it is difficult to see how the habit could have been formed years ago, and if you limit the possibility of its development to the days of high preservation, that is, to the last fifty or sixty years, the rapidity of the evolution is almost inconceivable.

For see what it means. A year of disease on a moor is normally followed by a year or two of recovery. The ordinary sequence is a year of disease, two years of recovery, two or three average seasons, a very good year, a bumper year, and disease again. This does not apply to every moor, for some moors seem to get neither bumper years nor severe outbreaks of disease, but, generally speaking, you do get a sequence of seven years or so. In the last seventy years or so, then, you might say there had been ten such sequences. But for ten thousand years, say, before that, there would not have been those sequences, for disease was not the common thing that it has since become. Would ten outbreaks of disease, attacking different birds, change the habits of a species ?

What would be interesting to know, of course, is whether cock grouse bred a hundred years ago

in the dress they wear in April to-day. But that is one of the many things we can never find out.

Grouse belong to the north and the west of the British Isles. There are none in the Shetlands, but from the Orkneys down to Yorkshire, and from the Hebrides down to Montgomeryshire in Wales, and to Kerry in Ireland they are birds of the moor and the hill. Their habitat is mainly a matter of food, which is heather; but it is also partly a question of climate. They want high ground; they have been introduced more than once to the heather of the Eastern Counties, Norfolk and Suffolk, but they have died out.

Heather is their staple food—the green shoots of *Calluna vulgaris* or common ling. This they eat, if they can get it, every month of the year. But there are other foods, both berries and leaves, which they add to it.

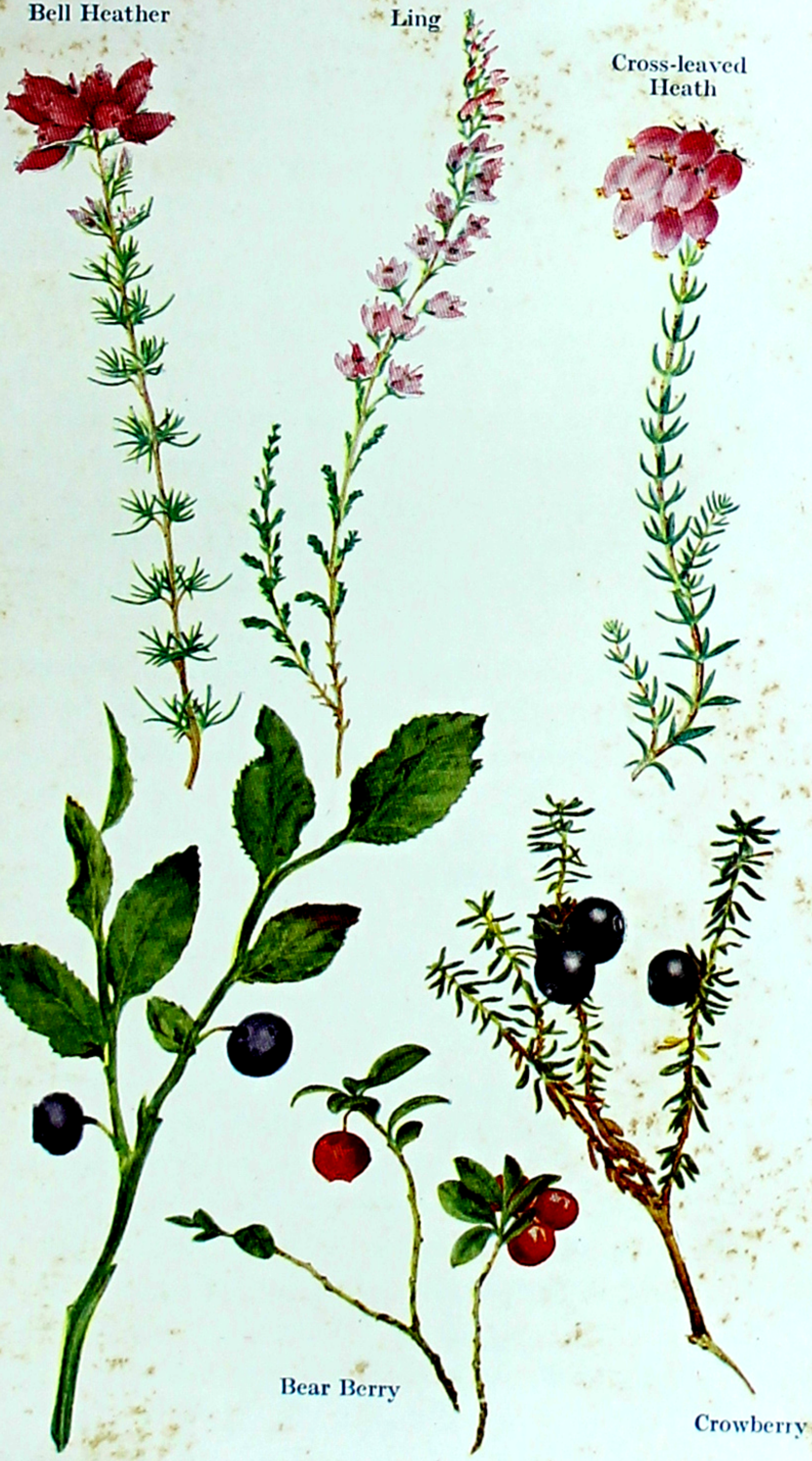
Six varieties of food are given in the illustrations, but the following would figure in the list of grouse foods in most districts:

1. Heather or ling (*Calluna vulgaris*). Grouse eat the shoots, flowers and seed-heads.
2. Bell Heather (*Erica cinerea*). The leaves are bitter, and grouse eat only the flowers.
3. Cross-leaved Heath (*Erica tetralix*). Grouse eat only the flowers.

These three heathers are illustrated, but the first is far the most important food.

4. Blaeberry (*Vaccinium myrtillus*), known in England as whortle-berry or bilberry, or as

SOME OF THE CHIEF FOODS OF GROUSE.



" whorts " or " hurts." Grouse eat buds, flower-stems, flowers, and berries. In August you will often find a grouse's crop full of blaeberries.

5. Cranberry (*Vaccinium vitis-idaea*). Grouse eat the berries. This is the Scottish cranberry. There is also

6. In England, another plant called cranberry (*Vaccinium oxycoccos*), but this is not common in Scotland.

7. Bear Berry (*Arctostaphylos uva-ursi*). This belongs to high, stony ground; grouse eat the red berries, and also the pink clusters of flowers, which appear in June, but which you will find growing with the berries in August.

8. Crowberry or crakeberry (*Empetrum nigrum*). The plant is like a heath, and the berries black and shining. Grouse eat the shoots, leaf-buds and berries.

9. Cloudberry (*Rubus chamæmorus*). A trailing plant with fruit like a yellow bramble. Grouse eat the berries and young leaves.

10. Bog Myrtle (*Myrica gale*). In England sometimes called Sweet Gale. Grouse sometimes eat the buds in winter.

11. Creeping Willow (*Salix repens*). This is a low growing plant with silky white leaves, of which grouse are very fond.

12. Cotton Grass (*Eriophorum polystachion*). The waving cottony tufts which follow the flowers are a familiar sight of marshy ground, but the grouse eat the flower in spring.

13. Sorrel (*Rumex acetosella*). This is a common

plant on the edge of the moor. Grouse love the seeds.

14. Field Wood Rush (*Luzula campestris*). This is a rush with broad leaves edged with silky hair. Grouse eat the flowers and seed heads.

15. Heath Rush (*Juncus squarrosus*). Like the Field Wood Rush, this grows in dry places, and grouse eat the flowers and seed heads.

Besides these, grouse occasionally eat other plants, such as clover, bedstraw and bracken, and seeds such as those of chickweed and knot grass. You may say, in fact, that they eat practically all seeds available on moorland. But their chief diet remains heather. In *The Grouse in Health and in Disease*, which embodies the work and the Report of the Grouse Disease Inquiry Committee, the percentage of heather is reckoned in various tables according to the months of the year, and examination of a large number of crops and gizzards shows that in March and April the percentage of heather shoots is between ninety-three and ninety-seven per cent., while in July and August, when there are berries all over the moors, it is still between fifty-three and sixty per cent. In October and November grouse eat less of the shoots, but more of the flowers and seed heads, and it is easy to see, therefore, how much grouse depend on a fine summer for bringing the heather into flower and ripening the seed.

Just as with partridges, so with grouse ; there are people who will tell you that grouse do not need water, and do not drink. They contend that no grouse has ever been seen to drink, and that

the contents of their crops are always dry ; also, that on certain well-stocked moors there is very little water. But against this you may argue that grouse are wild birds, and that few people have even seen them eating ; that in hot, dry weather they will leave the dry parts of a moor for the well-watered parts ; and that it is unnatural, since they are birds, that they should not drink water.

Besides food, grouse need grit to grind the food in the gizzard. Other birds, such as pheasants, can get along with flint grit and other coarse stuff, but grouse need white quartz or felspar. Young grouse begin to pick up tiny fragments of quartz when only a few days old, and the contents of an adult cock's gizzard have been found to measure in bulk as much as an ounce of shot, and to vary, as regards the number of fragments, from three hundred and fifty to five hundred and fifty. These fragments are most of them waterworn and polished, but with angles and flat surfaces—such fragments, in fact, as you would pick up from the burn.

Tiny fragments of granite, gneiss, quartzite, and so on, are sometimes found mixed with the quartz in grouse's gizzards. There is a very interesting collection of grits from game birds' gizzards, made by Dr. Hammond Smith, the pathologist of the *Field*, to be seen in the Natural History Museum in South Kensington. The grits have been washed and placed in glass-topped boxes, so that it is easy to see what is in each, and in one of the contents of a gizzard

there are a number of small garnets. One is reminded of "the toad, which, ugly and venomous, Bears yet a precious jewel in its head." Garnets in a gizzard!

Grouse vary in size and weight. Cock grouse weigh about twenty-four ounces, and hens about twenty-one, but heavier weights have been recorded. The heaviest on record, I believe, is one of which details were given in the *Field* of December 30th, 1922. It weighed thirty-five ounces. But a bird of thirty ounces is a great rarity. It is interesting to notice that at the beginning of the breeding season the cocks get lighter and the hens heavier. Cocks lose weight down to twenty-one ounces or so, and the broody hens, which become fat and sluggish, come to weigh as much as a heavy cock, even up to twenty-seven ounces. But later the positions change again; the cocks pick up weight, and the hen, who throughout her period of sitting lives largely on her reserves, drops at the end of the nesting season to less than twenty ounces.

The birds pair in an open season as early as January, but, of course, pairing may be long delayed by snow or hard weather. In March, when the cocks are showing off to the hens, they become so careless and so much excited by their courtship, that it is easy to come close to them and to watch the cock making his short "display" flights straight up into the air and down. If you disturb him he will only move a few yards away, and start again. Nesting begins

in April. Grouse eggs have been found in March—indeed, in 1923 on a moor near Leyburn, in Yorkshire, a nest containing four eggs was found in February—but mid-April is the usual time, and most of the eggs are laid towards the end of the month, so that the hen goes down on them in May. The nest is little more than a hollow, scraped in shortish heather and lined with a few bents of grass. It is generally in the neighbourhood of young heather, and often close to the burn. The number of eggs varies; six to eight is a usual number, but sometimes clutches are found of ten and twelve, and, of course, occasionally a bird lays no more than four or five. Much depends on the strength of the hen. The eggs are a brownish cream in ground-colour, thickly blotched with dark chestnut, and are almost oval in shape. Incubation lasts twenty-four days, like that of the pheasant, and the hen grouse, also like the pheasant, is an excellent mother. She will sit on her eggs even through heavy snow, but it may happen, when she leaves the nest for food, that it becomes covered by a drift. Even so, she may return to it if the snow melts. But snow, of course, is the great danger during the nesting time—snow in Scotland, and rain in England. Grouse seem to be able to stand snow better than rain, and persistent wet sometimes leads to nests being deserted.

The young birds begin with insect food, but soon take to the green shoots of the growing heather. So much has been learned from watching

young grouse brought up in captivity; but, as a fact, we know less about grouse at the early stages of their life than about them at any other time. To begin with, it is very difficult to watch them. A keeper may know where many nests are, but he does not like to disturb the sitting bird, and when she has hatched her brood there is little to be seen of them. If a hen grouse is suddenly disturbed with her young, she will try to lure away the intruder by pretending to have a broken wing, and fluttering along the heather; meanwhile the little grouse squat on the ground, and in their buff and brown downy feathers they are extremely hard to see, so that you may easily tread on them. A careful keeper will get out of the way as soon as he can, but for that very reason he knows little how his young grouse fare, and though he may have satisfied himself that the hens went down on full clutches in May, he will go out on the moor in July with many doubts and fears to see what stock he has got for August. He can do something to save their lives by reducing the number of their enemies, but birds and beasts of prey are not all that he has to fear. Foxes, stoats, weasels, carrion crows, hooded crows, gulls—all these take their toll of eggs or young birds, but there is a more devastating enemy still. That is the disease to which young birds are especially liable—*Coccidiosis*, caused by the parasite *Eimeria avium*, which in a bad year may clear off the best part of the stock.

This brings us to the consideration of grouse

disease in general. And at the outset let us realise that "grouse disease" is a vague general term which probably would never have come into existence had we known fifty years ago, even a small fraction of what is known now about grouse. What was known fifty years ago was that in certain seasons grouse died off from some illness of which the nature was obscure. It was concluded that this illness was one which was peculiar to grouse, and, therefore, the name given to it was "grouse disease." But that there was more than one disease to which grouse are liable does not seem to have struck those who first noticed the destruction of the stocks on the moors, though if it had been suggested to them that men died of "man disease" they would doubtless have regarded the suggestion as less ignorant than insane.

Grouse, of course, die from various causes: from artificially introduced causes such as shot-wounds, collisions with wire, traps, poison, and so on, and from natural causes, such as extremes of heat, cold and wet, starvation, exhaustion during sitting of hens or fighting of cocks in the breeding season, egg-binding, and so on. But the chief diseases from which grouse die are two—coccidiosis and strongylosis.

Coccidiosis is a disease which is not peculiar to grouse. It is found in pheasants, domestic poultry, pigeons and sparrows, and probably affects most wild birds. It is due to a parasite, *Eimeria* (or *Coccidium*) *avium*, which enters into and multiplies in the alimentary canal of young

grouse, destroying the membrane, preventing nutrition, and producing what is sometimes called "white diarrhœa." The young bird picks up the parasite in its food or water, and in turn as it becomes infected, spreads the possibility of further infection by its droppings. These contain the spores of the parasite, and may fall into water which other birds drink, or may be dried in the sun and then disseminated afresh by the wind. We do not yet know all that is to be known about coccidiosis; but experience seems to show that it is more prevalent in heat and drought than in cold and wet; not that heat or drought cause the disease, but that they assist its development. It is, so to speak, a childish disease, and full-grown birds rarely suffer from it. They must, of course, swallow the spores in water and food in the same way as do the young birds, but their stronger constitution throws off the infection.

One of the disturbing features of coccidiosis, in the gamekeeper's calculations, is that he cannot know when the young grouse are suffering from it. He can only guess, when he finds his hoped-for coveys absent in July, that the little chicks have perished earlier in the year. He will find no trace of them; how could he expect to find their tiny bodies in the heather when he does not know where to look, in all the miles of heather under his care? He is helpless, too, in another way, for there is practically no remedy. Heather-burning doubtless destroys the parasite on the area burned, but he cannot burn all the heather, and he cannot burn any heather just at the time when the young

birds run most risk of infection. All he can do is to hope.

And can he do more than hope in regard to the second of the two chief diseases that kill grouse—strongylosis ? Perhaps not. But he can at least understand what strongylosis is, and by what means you might expect to be able to combat it ; and he can do this by studying the report of the Grouse Disease Inquiry Committee. This report, embodied in a book, *The Grouse in Health and Disease*, will probably be acknowledged for many years to come as the finest monograph ever compiled on the life-history of a single game bird. The committee responsible for it first met in 1904, and in succeeding years, with the help of a number of scientific investigators, extended their work until, in 1911, they were able to issue a final statement as to the exact nature of what had hitherto been vaguely called "grouse disease" ; and also to publish an immense amount of collected facts and figures, of the greatest possible value to naturalists and to owners of grouse shootings.

The "grouse disease" into the nature and causes of which they set out to inquire, they named strongylosis. It is strongylosis which kills off mature grouse in the spring, which may empty a moor of its stock, and which, for many years before 1911, had puzzled and troubled gamekeepers and moor-owners and pathologists who worked at the problem of the diseased birds in the laboratory. And strongylosis, roughly stated, is due to the presence in the intestines of

the grouse of a parasite threadworm, *Trichostrongylus pergracilis*, which causes inflammation and subsequently death. This threadworm, however, is not necessarily fatal. It is present in small numbers in the caeca (intestines—literally, the dark, hidden, blind places; Latin *cæcus*, blind) of practically all grouse, even the healthiest, and normally a grouse is able to throw off any evil effects of its presence. But if the bird loses its stamina for any reason, it becomes unable to withstand the presence of the threadworm; its caeca becomes inflamed, it ceases to be able to digest its food, becomes weaker and lighter and eventually dies.

How, then, does it happen that this threadworm gets into the grouse in the first instance? To understand this, and the whole process by which the grouse acts as host to the threadworm, eventually, it may be, to die because of its guest, we must look at the life history of *Trichostrongylus pergracilis*. It is an extraordinarily interesting cycle, and nothing in it is more remarkable than the instinct which leads the threadworm to place itself where the grouse will find it.

This is the cycle. The larva of the threadworm, at an early stage in its existence, climbs to the tip of a green heather-shoot. The grouse bites off the tip of heather and swallows the threadworm, which passes into the caeca. Here it grows to its adult stage and pairs, and the female worm lays her eggs in the caeca. These eggs pass out in the droppings of the bird, and the larva hatches out from the egg in the dropping. Shortly after

hatching, it climbs to the tip of a heather-shoot, and so the cycle begins again.

Other facts in connection with the life history of this parasite are these. To enable it to climb up the stem of the heather to the tip of the green shoot it needs the heather to be wet. It is a tiny little creature only ·36 mm., or, say, one-hundredth of an inch in length when it is hatched, and it wriggles up through the water lying on the stem and among the leaves of the heather. Having reached the tip of the shoot, it goes through a process of drying or encystment which enables it to live for an indefinite period among the leaves of the heather shoot—in fact, until a grouse comes along to swallow it. At this stage neither moderate drought nor extreme cold can kill it. A plant of heather on which thread-worms had just climbed to the tips of the shoots has been shut up in a sealed box for a month, and at the end of the month, when the heather was very dry but still alive the shoots were dipped in water, when in half-an-hour's time there wriggled out from among the leaves large numbers of larvae, active and ready for swallowing. Again, heather tips with larvae on them have been placed in the cold storage rooms of the Albert Docks for a week, and on being thawed out of the solid block of ice in which they were encased, they were alive and kicking.

On the other hand, experiments in gradual drying have shown that the encysted larva cannot live under prolonged drought; and drought, too, will kill the eggs in the grouse's

droppings. If hot sunshine and wind dry the droppings on the heather, which in some summer days may happen shortly after they have been passed, the eggs perish. Sun and wind, day after day, must also kill myriads of the larvae on the heather-shoots. So that we may say that heat and drought diminish the number of eggs and larvae on a moor, and that wet and cold, if they do not actually encourage their production, assist the larvae at several stages of their growth.

And that brings us to the possibilities of combating disease. For when you have got it established, as the Grouse Disease Inquiry Committee certainly have established it, that the epidemic which from time to time empties a moor of it, stock is caused simply and solely by one parasite you will naturally argue that if you can get rid of the parasite, you will get rid of the disease. But at the outset you are met with one almost insurmountable difficulty. It is as simple as the cause of the disease is simple. There are thousands of square miles of heather, and almost every yard of it is infected.

You can see this for yourself. If you walk out on a moor which carries a good stock of birds, you can hardly go half-a-dozen steps without finding droppings, old and new. The coveys "jug," or "juk," that is sleep together, somewhere in the heather every night, and during the night everything that is in a grouse's digestive system passes through it, so that each morning adds so many more heaps of droppings to the

heather area. And each of these droppings contains the eggs of *Trichostrongylus pergracilis*. In the summer, unless there is drought, these eggs hatch in a few hours into larvae; and in the autumn and winter, when the weather is wet and cold, all the eggs accumulate until the warmth of spring hatches them, and there is a sudden population of millions of threadworms climbing the young shoots of the heather ready to be swallowed by the grouse.

This, of course, is in reality an unnatural state of affairs. With the killing down of the grouse's enemies, the eagles, peregrines, foxes, stoats and weasels which a hundred years ago kept the grouse population down to far lower limits, the whole balance of wild life on the moors has changed. There are more grouse than ever there were; and, as a consequence, there are more threadworms than ever there were. It may be pleasant, when the shooting season comes round, to know that there are plenty of grouse on the moor; but you are sure to have to pay for unnatural conditions somehow, and you pay for them, on overcrowded moors, with the increased risk, in some seasons almost the certainty, of disease.

And the disease, obviously, will come in the spring. In the early spring, when the birds have had a difficulty in finding food through the long months of winter, with the heather perhaps, covered with snow, their powers of resistance to illness have been lowered. Later in the spring, the cocks naturally lose much of their strength

through the strain of breeding, and the hens become weakened after the tiring business of sitting. The supply of heather, after the winter, before it begins to grow again, is at its lowest; and all through the spring the eggs of *Trichostrongylus* are hatching, the larvæ are climbing, and the grouse are feeding. Bird after bird begins to weaken; and the more birds there are to feed on the heather, the more their droppings infect the ground on which they feed.

It sounds hopeless, and in some years, on some moors, no doubt it is. But disease years, as a fact, are the exception, and not the rule. The moor recovers after a year of disease, and the cycle of seasons fulfils itself—average, good, very good, bumper, disease, recovery, average. And the aim of the manager of the moor—the owner, if he will take the trouble, or the game-keeper, if he is given his opportunities and will work to improve them—should be to lengthen the top of the curve of his cycle; to keep the record of the seasons at "good" as long as possible, to prefer "good" to "very good," and to be afraid of "bumper," because he knows its consequence.

How can he do this? *Trichostrongylus pergracilis* dies in drought, flourishes in wet and cold; can kill a weak grouse but not a strong one. Therefore, drain your moor so as to have as few patches of stagnant wet as possible among the heather; and keep up the strength of your stock of grouse by giving them as good a supply as you can provide of the young green heather they need for food. See that, having plenty of

food, they are also able to digest it ; that is, give them, unless they have already got it, an abundant store of quartz grit. And, lastly, try to ensure that your moor shall not carry a larger head of grouse than you can supply with heather.

Not all these things are easy. Draining, as a rule, is merely a matter of labour and of time. Plainly, if you employ a keeper to dig, he cannot look after the moor while he is digging. It will probably be waste of time for him to dig the drains or " grips " himself, but he can show a man used to the work what he wants. It is no use draining one stagnant patch merely to make another stagnant patch below, but if you can run a series of broad, zigzag " grips " so as to drain good feeding ground into bog or " flow " ground, or into the burn, you have not only enlarged the area of heather on which grouse droppings will dry quickly, but you may have laid bare a fresh supply of quartz grit. A grip, by the way, should have a broad bottom, say a spade's width, and sloping sides, and the turfs cut out should be thrown some distance away, otherwise they will fall in or be kicked in again.

To ensure a good supply of grit, in the same way, may be partly a matter of hard work ; you may find that parts of the moor, or the moor as a whole, are deficient in good white quartz. If you cannot find it, you may decide even to buy it ; you may be sure of one thing, that grouse will not be happy without it. In times of snow, or when the burn-courses or other sources

of supply are frozen over, a keeper will scrape ledges and other bare spots where he can throw down grit. I have heard of more than one instance, particularly in Wales, where the supply of quartz is local, in which grouse have been found to remain on a particular stretch of ground, where they were given bought quartz, whereas they never would stay there before without the quartz.

But neither draining nor grit is the chief thing. Up to a certain point, a moor drains itself, and on most moors where there are grouse there is grit already. What the moor manager really worries about is heather-burning. Without burning the heather periodically you cannot have that perpetual supply of young green heather shoots which form the staple food of grouse. But to burn a moor properly is a difficult thing, needing hard work, good weather, and good luck. Hard work first, for no one until he has measured a moor for burning realises how big an area of ground has to be gone over; but good luck with the weather always, for you can only burn when the heather is dry enough, and the wind in the right direction. It is only in about one year in three that the weather is what the heather-burner wants.

But to understand what is meant by burning a moor properly for grouse we must go back some distance in time; and, having done so, we shall get a strangely interesting comparison if we come forward again to what was happening, so to speak, yesterday. In both cases we shall

find ourselves learning about grouse through dealing with sheep.

A hundred years ago the grouse moors of Scotland were sheep moors. Sheep counted and grouse did not. The moors were let to sheep-farmers for grazing, and though there were Englishmen like Charles St. John who lived in Scotland because of the sport he could get there, or Peter Hawker, who travelled north in October, 1812, to try to shoot his first grouse and black-cock (he decided that ptarmigan were too tame to bother about), the grouse on the Scottish moors were, in the main, shot by Scotsmen who lived on the spot. There was no grouse-shooting season in the sense in which we speak of the grouse-shooting seasons of the last fifty years. The main purpose of the moors was to graze sheep.

And, since sheep require young heather for grazing, there were clauses in the leases granted to the sheep-graziers requiring them to keep up a proper supply of young heather by burning the old. One-tenth of the heather on the moor had to be burned every year. This was a large area, particularly on large moors where there was far to go, for in those days there were few roads; and we may be pretty sure that the burning was haphazard and careless. The sheep farmers burned large stretches at a time, to save themselves trouble, and they did not care over-much, we may suppose, if they burned a little more than a tenth one year and a little less than a tenth the next, or whether the wind took the

fire over the march* into a neighbour's grazing. Their flint and tinder started the sparks at the bottom of the hill, and the wind did the rest.

The grouse-shooting, meanwhile, was good enough for those who were on the spot to enjoy it. But it was soon to become better. Fashions changed. The day of the shooting lodge, with its warmth and hospitality, was to follow the day of the inn, which cannot have been very comfortable. "Such is the misery of the Highland public houses," Hawker writes in 1814, "and particularly to our perfumed young men of fashion, that I have generally observed nine out of ten of them, however good may have been their sport, come home cursing and swearing most bitterly, about their *wooden berths*, *peat fires*, and *oatmeal cakes*." (Hawker uses plenty of italics, and I always like to notice his choice; you can almost hear him talking.)

That was in the year before Waterloo, and conditions changed very little in the next forty years. Then came the railways, and the grouse moors were discovered by Englishmen. At the same time guns were being improved—it was in 1853 that Lang introduced the breechloader. Men who shot well could shoot better; more men took to shooting. And grouse became the fashion. Owners of moorland found that they could let their moors to grouse-shooters for more than they ever got from graziers. So that the

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* The old English word for boundary; used for grouse moors and deer-forests.

whole economic balance of the Scottish countryside was altered, and the moors became, what they have remained ever since, the chief sporting ground of the United Kingdom.

This meant a change in methods of heather-burning. When the owners of the moors began to employ keepers to look after the grouse, the shepherds took second place. The shepherds had burned one-tenth of the moor every year, and consequently there was plenty of short heather, and very little old long heather. But the grouse-shooters and their keepers thought that long heather was the thing. They noticed that they flushed their grouse best from the long heather, and that the longer it was the closer they could get to their birds; so they stopped the shepherds from burning any heather whatever. For a time things went well; but they did not foresee the consequences.

There was less food for the sheep, so the rents from graziers dropped. But, also, there was less food for the grouse. For a few seasons the grouse could live on the young green heather which had grown on the big stretches burned by the graziers, but after a time there was nothing but old heather to eat. Here and there the graziers, seeing what was going to happen, took the shooting as well as the grazing rights—for only the owner of the shooting rights could burn heather—and burned the moors for sheep again. But where the moors were kept entirely for grouse and no heather was burned, the inevitable consequences followed. By the end of

the sixties, food-heather had almost disappeared, and grouse were beginning to die; and in 1872 and 1873 the countryside was swept by disease.

The reason was plain, and the moor-owners did not take long to discover it. On the moors which had been burned by graziers the crop of grouse had improved instead of going back. Obviously the grouse as well as the sheep had profited from the burning. Therefore the moors must be burned again, instead of being left alone. But even so, the moor-owners did not learn their lesson properly. The graziers had burned in patches. The moor-owners decided that it was the patches which were the secret. They still wanted to keep their long heather, so they burned patches in it, not realising that what really mattered was the area burned. The old ten-year rotation might not have been ideal, but the new "patch" method, which was nearer to a hundred-year rotation, was still hopelessly insufficient.

And it has remained insufficient ever since. There are many moors in Scotland which have never yet been properly burned. The great majority of moors could be burned much better. And the reason, again, is obvious. You cannot cover the ground. The keeper, under the conditions and with the limitations of an average moorland property, cannot burn the area which is required; he has not the time or the men.

An easy calculation shows that this must be so. The best heather for food—the heather from which grouse can get green shoots even in March

when food is scarcest, and what there is needs protection from frost—is from six to fifteen years old. Heather that is younger than six years old is too short to protect its side shoots, which in the cold become sapless and withered; heather which is more than fifteen years old becomes leggy and wooden. Two corollaries follow—they are in reality one. The moor should carry as much six-to-fifteen-year-old heather as possible, and there should be no heather on the moor which is more than fifteen years old.

That means, of course, that one-fifteenth of the area of the moor should be burned every year. Take a fair-sized moor, then—for argument's sake let us say the area under heather is 6,000 acres. One-fifteenth of that area comes to 400 acres. This has to be burned within a specified time. The period in which heather may be burned in Scotland is limited by statute to the winter and early spring months—November 1st to April 10th. In very wet years an extension can be obtained to April 25th; but in practice, moors are burned in the early spring, as soon as the snow and rain allow it, and, I suppose that, though burning may begin in February, more heather is burnt in March than in all the rest of the months put together. How strong the link between March weather and heather-burning must be for the Highlander! Nothing brings back March in Scotland to me more swiftly than the smell of burning heather; there comes down wind in the south country the reek of a

heath fire in May or August, and I am back on the bank of the salmon-river, with the March evening darkening on the water, and the sparkle of fires dotted along the flank of the distant blue hills.

But on how many days can a keeper burn the hill? The Grouse Disease Inquiry Committee collected statistics of the time spent at the business throughout Scotland, and they found that, taking east coast with west, dry moors with wet, high ground with low, an average of ten full days was about the most that a keeper could hope for. He has to allow for rain, for snow, for high winds, which make it impossible for him to control a fire, and—not the least of his difficulties—for getting men to help him with the job. And if, with an under-keeper and, say, half-a-dozen helpers, he works as hard as he can for ten days—made up, some of them, perhaps, of scattered half-days; if, further, he burns on the strip or isolated patch system, which is generally considered the best, he will do well if he can burn forty strips a day. If these average half-an-acre, he will have burned twenty acres in a day, or two hundred in the whole time available. That is just half of what he should manage if he is to get a fifteen-year rotation, and to have no old heather on the moor.

And his moor would be, in comparison with most moors, well burned. He would have a thirty-year rotation, and most moors have a rotation of nearer fifty years, if, indeed, they can

be said to have a rotation at all. For there are parts of some moors which the keeper seems to give up as hopeless; they look as if they had not been burned within living memory, and probably they have not. For when the moor-owners began to burn again, after the disaster of 1873, they did not realise that they were twenty years behind time, and that what they ought to do was to burn a much larger area than the one-tenth which the graziers used to burn; so as in time to catch up to their proper rotation. Most moors have never yet caught up to their proper rotation, and probably never will.

Yet to do so would make all the difference to their shooting. If you once grant that the stock of grouse which a moor can carry depends on its available food supply, and that with a large food supply you diminish the chances of disease, your only course is to burn. Count your food supply as the quantity of six-to-fifteen-year-old heather you can provide for the birds, and then see the difference between moors burned with a fifty-year and a fifteen-year rotation. With the latter, sixty per cent. of the heather is first-class food; with the former, you have eighteen per cent. That is to say, your fifteen-year-rotation moor can safely carry three times the number of birds that can be carried by a fifty-year-rotation moor.

Clearly it would pay many owners of moors to burn their old heather far more extensively than they have done. But the difficulty is physical; the thing needs skilled direction, and plenty of hands to be directed; you want

labour and time, and even if you can pay for both, very likely you will be able to get neither. As for doing what some people will suggest, in order to be able to get back to a short rotation, which is to set fire to the long heather wherever you find it, all that this would mean would be the surrendering of control over the fire for days together and over an unknown and incalculable area of moor. For the very old stick heather will only burn when it is dry, and when the fire has really got hold of it, and has got right down into the peat, it is the most difficult business to control it—the fire creeps along under ground, and bursts out in new places. It needs perpetual watching, otherwise you may set fire to young heather bordering on the old, and so do more harm than good.

That is what happened during the war. And it is interesting, as I have suggested, to compare what happened when matters were left to the sheep-graziers a hundred years ago, with what has happened in our own time. During the war, under the provisions of the Defence of the Realm Act, the Government did a great many wise and necessary things, but also a few things which were unnecessary and ridiculous, or even worse. One of these was when they took out of the hands of the landlord the power to burn heather, and gave it to the farming tenant, to burn as and when he chose. This was unnecessary, for the landlord was only too anxious, in his own interest, to get his moor burned properly, and was not likely to neglect any opportunity of doing so;

it was ridiculous, for it was supposed to improve the grazing at once, and you cannot get good young heather the next year after burning old; and it was worse than ridiculous, because it resulted, as everyone who knew the moors could have told the Government it would result, in mere destruction instead of benefit. The shepherds, some of them, perhaps, with a grudge against the keeper, who was away at the war, some of them merely careless, set fire to the heather anyhow and anywhere. As an old keeper who could only look on put it, "they just threw a box of matches on the hill and left it." They burned young heather with the old, and the result was that good grazing and good food were lost, whole hills were set on fire, and damage was done which years could not remedy. The burning of heather as arranged by Government during the war will always remain a capital example of what not to do and how not to do it.

All this disturbance was the more unfortunate, in that if there is a fundamental axiom on which gamekeepers and shepherds, moor-owners and graziers, can agree, it is that if a moor is well-burned for grouse, it is well-burned for sheep. Sheep, of course, eat a few things which grouse do not—the thin grasses, for instance, which are some of the first plants to appear on newly burned ground; but their main pasture on the moor is young heather, and if there is plenty of it they will not be so likely to pull up the smallest plants just as they are rooting themselves from seed. Then, again, old stick

heather is useless to sheep for food, and even when it is burned, farmers hate it, for the sheep walk through the tough, sharpened stakes left by the fire and tear their wool. Better, plainly, that heather should never reach the "stick" stage.

But to be able to burn heather in early autumn is not the only facility needed for better moor management. Ten years ago gamekeepers would have stared at you if you had suggested that you wanted to burn heather in the summer—indeed, only the best educated of gamekeepers to-day, perhaps, would not think you insane to propose such a thing. Yet, in certain circumstances, it is the only thing to be done.

That is, when the heather-plant is attacked by the heather beetle. Here and there on most grouse moors, sometimes on a large tract, you will notice that the heather has changed colour. It is no longer green, but rusty and withered; in fact, as near as may be dead. Keepers for years have called this "frosted" heather, and, in fact, may still do so, and will stoutly tell you that frost, and nothing but frost, has caused the heather to turn from green to red and grey. If you point to healthy plants growing next to a withered plant, and ask why the frost should have singled out the one and left the other near it unharmed, they will not be able to give you a reason, but they will repeat what they said. They are wrong, of course, for it has been conclusively proved that this "frosted" heather has, in fact, been eaten to the stem by what is

now known, with satisfactory plainness, as the heather beetle, *Lochmaea suturalis*.

This is an interesting insect. Not all his life-history was known when the Grouse Disease Inquiry Committee published their report. But we know that, like the larvæ of most moths and butterflies, the larva of *Lochmaea suturalis* lives on its food-plant during the months May to August, and then buries itself for the pupa stage. And since we know, too, that heather once attacked by the beetle or its grub is useless for grouse or sheep, plainly the thing to do is to attack the larva. Autumn or early spring burning will not be sufficient, for unless the fire goes deep into the ground it does not touch the pupæ. We must burn the heather, then, in the summer, and to be able to do so we need three things ; first, permission from the Legislature to do so ; second, paraffin, for the heather with sap in it will only burn in very dry weather ; and third, courage to go on the moor when there may be young grouse about. Keepers like to leave the moor alone till the young birds are well grown. But, after all, it is looking forward for other young grouse another year to try to get rid of the diseased, or rather, attacked heather; and when once the old heather carrying the beetle is burned, the young heather will shoot green and clean.

Have we now come to the end of our precautions ? One more remains. Having done the best he can to provide the largest quantity of young heather, the moor-owner still wants to be

sure that the stock, which is to eat it, is not too heavy. We have seen that there is a kind of rough cycle of seasons of grouse moor prosperity —average, good, very good, bumper, disease and recovery ; and we know that the wise moor-owner or gamekeeper prefers the good to the very good season, and is afraid of the bumper year, because he knows what usually follows. So that when he gets to the " good " stage of his cycle, he shoots hard, to keep down his stock to what it was at the beginning of the season ; if he finds that he is going to have a very good year, he shoots even harder ; and if he actually arrives at a bumper year, he shoots as hard as the weather and his guests and the grouse will let him. He cannot shoot too hard, but the difficulty is to get the shooting done. The first thing to do is to get the guns, and when it comes to September people are beginning to go south again. He may want nine or ten guns ; so, perhaps, does his neighbour, and most of them will have to come long distances to the moor. Having got his guns, he may find that the weather prevents him from driving ; you cannot shoot in a mist. And, last and greatest difficulty of all, the grouse may take charge. So long as they keep in coveys or in small packs he can make a bag. But if they join into huge packs his case is hopeless. Even if he can get them over the guns he cannot reduce their numbers, for the great majority will go over unshot at. And the later the date in the year, the more formidable each difficulty of guests, weather and packing

becomes. Clearly, he is happier as well as wiser if he can prevent "good" from worsening into "very good."

But suppose that he has managed everything with the greatest care; suppose that his keepers have done all that they should have done in burning and draining; that there is a good stock of grouse left at the end of the season, and a good supply of heather to carry them through the winter and early spring—can he then be certain of the following season? The answer to that is the year 1913. For years before 1913 there were moors along the Border which were some of the best managed and best keepered moors of all Scotland; they carried fine stocks of grouse year after year, but there was plenty of heather for the stock, and plenty of everything, in fact, that grouse could seem to want. Then came 1913, the worst year since 1873. All along the Border the moors were emptied. The grouse were gone. August came and there was nothing to shoot.

What had happened? It was not possible then, and it is impossible now, to say for certain. There had been disease, of course, in the spring. There is always a certain amount of disease, or rather, perhaps, mortality—for grouse, like other birds, must die some time—on most moors in the spring. This year it had been worse on some moors than on others. Yet nowhere had disease in the spring been so markedly prevalent as to lead the keepers to guess at the conditions of the summer. But when they went out to look round on the moors in July things were plain

enough. The grouse were not there, either the old birds or the young coveys. There were a few diseased and a few healthy birds scattered here and there, but of the usual grouse population not a sign.

I happened to be shooting, or rather walking about, on a Dumfriesshire moor on the Twelfth of August that year; and I remember nothing more vividly than the strange silence of the hills. Except for the pipits springing now and then from the heather and the chatter of an occasional ring ousel, there was no life or sound for miles. The keeper was frankly puzzled. He had expected things to be bad, but this was something more. If it was disease had emptied the moor, why had he not picked up more dead birds in the spring?

Some days later I was talking to an old Border shepherd, who said very little. But he would not hear of disease. The birds were gone; they went in the spring; he had seen them go. They had gone "over the Roxburgh hills." He had seen birds leave a moor before in the same way. He could give no reasons, but that was what he had seen.

What were we to think? All along the Border it was the same, and on other moors there was the same inability or unwillingness to put down the absence of the stock of grouse to disease. But if it was not disease, but a general movement of grouse from the moors, what caused the movement, and how should such a movement be classed? Could it be called migration?

Migration, I think it must be owned, is a word which is inapplicable to movements of this kind. It is applied to movements of birds which take place annually and regularly, and which involve crossing the sea from one continent to another. It is true that you cannot draw a hard and fast line between migrant and non-migrant birds, for there are many birds which are natives of England that shift their quarters in winter and summer, and many, too, such as starlings, woodpigeons, woodcock and snipe, which are partly resident and partly migrant. Our native birds are joined in any hard winter by enormous numbers of the same species from Norway, Sweden, Germany and the North. But these movements, in any case, are regular, and the movements of grouse are spasmodic, and hitherto have not been fully explained.

In 1921, with the object of obtaining as much evidence as possible on this problem of the movements of grouse, the *Field* sent out circulars to a large number of owners and tenants of grouse moors in Scotland. The questions which were asked were framed with a view to tabulating any information which could be collected in regard to the situation, aspect, climate, and so on of different moors, if the evidence showed that certain kinds of moors were more likely than others to be deserted by grouse or to receive additions to their stock. But no such tabulation seemed to be necessary or, indeed, possible. Answers were received from moors in every district in every county in Scotland, and the

most careful sifting of the evidence failed to establish any definite connection between this or that condition on the moors and the movements of grouse which had here and there been noticed. There seemed, it is true, to be a tendency for any movements which took place to play along lines running north-east and south-west, which is the general line of the ridge of the Scottish mountain ranges, and the valleys that run with the ridge; and this line, too, would be the direction of the gales of autumn and winter. But otherwise, all that the evidence did was to confirm the knowledge which we already possessed, that under stress of severe weather, particularly snow, grouse would leave their native moors in winter and might or might not return in their full numbers with warmer weather and the breeding season.

Still, there was plenty of evidence, however difficult to collect, of spasmodic movement. And if there was any theory which it seemed possible to frame in looking at the evidence it was that the movement might be due to over-crowding, which either had occurred or which some obscure instinct in the grouse warned them might occur. We should always, I suppose, look for the simplest cause in matters of this kind, and if we guess at overcrowding as the cause of spasmodic, that is, irregular, movement, we are back again at the simple cause which leads grouse to leave their native moors in severe weather, which is lack of food. Overcrowding, the grouse as well as other animals must know, means too many mouths for too little food; in some cases we ourselves

can see the overcrowding, and in others the grouse may see it before we can. They may say to themselves either "There are too many of us here," or "Here come some more; there are going to be too many of us"; they become suddenly anxious or alarmed, and they decide to look for fresh quarters at once. If they all came to the same conclusion, newcomers and natives at the same time, they would all leave the moor and we should get one of those curious cases when the stock seems to desert the heather although there is nothing the matter with it.

What is unquestionable, in any case, is that years of disease are also years of movement. We may not be able to trace the movements, or to say exactly which way the birds have flown, or which grouse come from which moor. But there is abundance of evidence that when moors in one district are suffering from disease and diminution of stock, moors in other districts are fuller of grouse than usual. And this brings us to a very interesting theory which was first propounded in the *Field* by Mr. A. S. Leslie, the Secretary to the Grouse Disease Inquiry Commission—the theory of redistribution. Broadly stated, it is that if grouse become too numerous in any particular district, they will tend to distribute themselves in districts where there are fewer. But they do this in a particular way, and if they are not alarmed—as I believe they are when they leave a moor suddenly—they take time about it. They move deliberately, and so,

if you think over it, they could move in only one way.

For here, again, we are up against the old difficulty, the food supply. The grouse decide, somehow, that there is not enough food, and that they must go elsewhere to find it. But, not being really troubled or anxious, they move slowly away from the congested centre. And as they move, they push other grouse in front of them. It is like the spread of ripples made by a pebble thrown into a pond.

We, of course, if we wanted to redistribute grouse, and could pick them up as we pleased, should merely survey the whole available area of heather, and catch up so many hundred birds from one district and dump them down in another. But a grouse will neither reason nor act as we do. He cannot survey the whole area of heather, so that he merely pushes outwards looking for more. It would not occur to him to fly over the heads of the grouse near him, for there would be no argument in his brain that there must be heather beyond them.

And so, by a slow, natural process, empty moors outside the congested area become re-peopled. We saw this process at work after the war. The Argyllshire moors, through a combination of circumstances—high mountains, in which ravens and hooded crows and foxes could breed unchecked, long arms of water which brought gulls, and so forth—became emptier of grouse than any other moors in Scotland. Then the keepers came back, and got to work to keep

down the numbers of the hoodies and the other enemies of the grouse, and the moors were free to receive fresh stock. In the East of Scotland the stocks were heavy—too heavy, indeed—and gradually pushed West. By the fourth year after the war the stocks of Argyllshire were almost back again to their old numbers.

It is during these periods of slow recovery, when the stock on the moor has been brought so low that the ground cannot be shot, that the question is sometimes asked—it may be by the owner, anxious to let the moor, or by the tenant anxious to shoot it—"Cannot I get grouse from elsewhere, and put them down on the moor?" And there is more than one answer to the question. Suppose, for instance, that the owner of a moor in, say, Forfarshire, found that he could not get his stock reduced by shooting, and believed that he had too many grouse on the ground for the heather supply available; and suppose that he were able to net a hundred brace or so and send them across to an empty Argyllshire moor, would he not be benefiting Argyllshire and Forfarshire alike? It might be so: and as a fact, that question was asked in 1922 by the owner of an East Coast moor; but it met with a negative answer, for he was unable to get the nets he wanted, and his neighbours, who did not consider their ground overstocked, did not wish to help him. They may, too, have considered that netting grouse is a cruel business, which, in the way it is practised by professional netters, it certainly is.

But the owner of a moor short of birds, unable to obtain grouse from the actual owner of another moor, may then ask whether he cannot buy them elsewhere. And, of course, he can—at a price. He will find they are expensive, and he will forfeit his self-respect. For he can only buy them from the professional netters, and the trade of the professional grouse-netter, though it may be strictly legal, is one with which no one wishing to keep the title of sportsman would think of having anything to do. For the grouse which the netters sell come off other people's moors. The method of the netters is to rent a strip of ground lying on the edge of a moor, or between two moors, and then to erect a long line of nets on poles, into which the grouse fly by night. This is a process which is within the law, for the netters are not trespassing in pursuit of game. But, of course, they are spoiling the shooting on the neighbouring moor—indeed, many moors have been ruined by the netters—and for that reason, the man who buys grouse from netters, knowing what their methods are, and knowing what must be the consequences to other shooting men, is naturally looked upon as a person with whom decent people would not shake hands.

It is a strange thing that this grouse-netting should still be legal. Apart altogether from the injury that it does to other people's property, it is unquestionably a very cruel business. The grouse fly into the nets by night, and hang tangled in the meshes until the morning. They may break their legs or wings, but they remain

in the net, twisting and struggling, until the netter in the morning comes to pull them out. I have been told that thirty per cent. of grouse caught in nets have to be killed. Is it not strange that the law should not prevent such a thing ? In 1904 a Bill passed through the Houses of Parliament, practically unopposed, which made the pole trap illegal. The pole trap is a gin set on a tree, or a rock, or any exposed high position, and baited so as to attract hawks and other birds of prey. It was made illegal because of the cruelty involved, for the wretched bird was caught by the leg in the teeth of the gin, and had to stay there struggling until a keeper should happen to come by and put it out of its misery. Then what are we to say about grouse-netting ? Where, as regards cruelty, is the difference ?

One possibility of restocking empty ground remains—it is suggested in the chapter on " Grouse in Captivity " in *The Grouse in Health and in Disease*. That is rearing grouse by hand. It presupposes the ability to obtain grouse eggs, which is a large assumption, for not every moor owner wants to get rid of the clutches out of his own nests ; and it assumes, too, that the hand-rearing will be successful, whereas it is plain from the experience of the Grouse Disease Committee, who bred grouse on an " observation area " of heather in Surrey, that it is ticklish business needing more than an average allowance of luck. For instance, Dr. Hammond Smith, who writes the chapter describing these grouse, says that in one year, though ten young grouse were reared

from eggs hatched out under grouse mothers, three other batches of eggs, two of twenty and one of seventeen, were given to Yellow Orpington hens. Of these one hen hatched seventeen and killed them all, another hen hatched eleven and killed them all, the third hen ate all the eggs.

Still, grouse can be reared by hand. The best accounts I have read of the bringing-up of young grouse hatched under hens, and of their behaviour on the ground near the coop, are in the *Game-keeper* of various months in 1899, in which several keepers give their experiences. Young grouse have been successfully reared by giving them for the first few days oat and barley meal, boiled eggs, and chopped heather, and later on, rice, oats, barley and even Indian corn. They will eat almost anything in the way of greenstuff, such as lettuce, cabbage and cauliflower. An amusing examination paper was set by one gamekeeper who had reared grouse as a sort of challenge to others; I give the substance of it here:

1. "At what age are hand-reared grouse able to pull heather for themselves?

Ans.: Young grouse try to pull heather as soon as they are able to run about, but are generally three days old before they have sufficient strength to pull much.

2. Do they give any sign or make any noise when a hawk or other bird appears?

Ans.: They utter a quiet noise sufficiently loud for the rest to hear at 20 yards away, and

as a rule they race to the nearest shelter to hide, although some squat close to the ground.

3. Why would it be difficult to tread unawares upon hand-reared grouse ?

Ans. : Because, when ten days old, if they squat in front of anyone the grouse chicks spread their tails like a fan and move them backwards and forwards. At the same time their heads are moved somewhat more quickly, while a loud ' queak, queak ' is uttered.

4. What do the young grouse do if they see their own or the excrement of other birds near food of which they are about to partake ?

Ans. : They shake their heads and walk away. Other chicks, at a distance of several yards, understand the meaning of this action.

5. At about what age do they get their black tails ?

Ans. : The black tail makes its appearance about the age of six weeks, sometimes a little earlier, and is full-grown at nine or ten weeks old.

6. Are tame grouse playful ?

Ans. : Yes ; it is very amusing to watch them when they come across a bare spot. They run round and bow their heads somewhat similar to people enjoying a Scotch reel.

7. Describe the attitude and method of attack of a tame cock grouse. Does he make any noise at the time ?

Ans. : They always come up to the enemy sideways, with tail spread like a fan, and wings a little drooping. The grouse strikes first with the wing nearest its antagonist, and then wheels

round and uses the other. The bird catches hold with the bill, presses both feet against its opponent, flaps with its wings, and utters a defiant noise.

8. Is the hen grouse pugnacious as well as the cock ?

Ans.: No.

9. Cock grouse at this season make a peculiar noise. Describe it.

Ans.: It is a hiss, somewhat similar to the hiss of a goose, but not so loud. It is only during two months of the year that they make this noise."

Finally, a note on the way to tell old birds from young. Early in the season, if you spread out the wing, you will find the primary feathers of the young bird narrow in the web, and the third primary short. In the old bird the web of the feathers is broader, and the third primary has grown to its full length. These characteristics disappear later in the season, but up to December you can still generally tell a young bird by holding it up by the lower mandible of its beak, which either bends or breaks with the bird's weight.



Wing of old grouse, shot on Aug. 12th, showing fully developed primary feathers.

CHAPTER VII

GROUSE: II.—SHOOTING

So much for natural history. And now we come to the shooting. There are three ways of shooting grouse, and each of them has its separate merits and pleasures—shooting grouse over dogs, walking them up without dogs, and driving them. Many people—most, perhaps—will tell you that of these three, driving is first and the others nowhere. Well, far be it from me to say a word that might seem to decry grouse-driving, for I shall always think it easily the finest form of shooting to be had in these islands, for interest, excitement, difficulty and the magnificence of its surroundings. But I have had an immense amount of pleasure in walking up grouse, with and without dogs; and when a man tells you that he can find no interest in walking, he is generally a man who cannot use his eyes—or, indeed, perhaps his legs. That last is the commonest reason; it is a tiring business needing good muscles and a sound wind, and it is not every one who has the luck to keep both.

And of course, walking up grouse without dogs is a much more tiring job than letting the dogs find the birds for you. To be sure of not walking

over the birds the line must cover every few yards of heather; it must wheel and counter-wheel, and make good the steep and difficult places as well as the plain and easy. You will find yourself walking through boggy ground, over boulders and sliding "scree," through heather so high that you can hardly step over the stems—worst of all, through bracken. Tall bracken is not only, after rain, the wettest thing in Scotland, but, short or tall, it is also the most difficult to shoot out of; you cannot see where you are going, you tumble into holes, and you trip up over stones.

Whereas the dogs find the grouse for you. They are sent forward to range the heather in front of the guns, and to "point" or "set to" any grouse they may find. Pointers and setters are the two kinds of dogs used, and of the two, the setter is, I think, the better dog in that he ranges more freely and gets better through the heather, for the hair between his toes prevents him from becoming footsore so soon as the pointer. To me there is the further attraction that I like setters better to look at; I think a red setter the most beautiful dog there is.

And generally speaking, I suppose, we shall all wish to have dogs to find the birds for us, and the better the dogs the better the day. The man who finds pleasure in shooting without dogs is the man who likes to be absolutely alone; who wants no one to speak to, no one to share his sport; who merely likes to be out with a gun, to walk where and as much or as little as he

pleases, to find, shoot, and carry home his own game.

Otherwise, to walk without dogs is merely to become unnecessarily tired, which means bad shooting; to add a very considerable strain to the eye and hand, for, if you are walking heather with the chance of a grouse getting up forty yards away, you must carry your gun at the ready and shoot as quickly as you would shoot at snipe; and to waste, or perhaps rather spend, a great deal of time in making good every patch of heather, likely or unlikely.

But we may have to do this now and then, even with dogs. For, of course, the first thing to consider in walking up grouse is the wind. Your pointers and setters—you will be working them two at a time—can only get the scent when it is coming down wind to them, and so you must work them so that they will be ranging with the wind coming to them for as long as possible. You will not, therefore, move directly up wind, but across the wind and back again. Of course, now and then, owing to the contours of the ground, you will find that the line is being swung into the wind, or you will have to walk a stretch of ground down wind, in which case the keeper will take the dogs in leash. But generally you will be working across the wind, choosing the direction in which the line of keepers and guns moves so as to drive your birds where you will want them later in the day.

You are out, then, on your first Twelfth of August, with the sun on the heather and a west

wind blowing. You will be walking, I will guess, with the head-keeper on one side of you and a ghillie on the other, and beyond the keeper another gun. Sixty yards away the red setter bitch—she is the keeper's favourite—moving with an easy, rippling gait through the heather, suddenly checks, stops, stiffens. Her head has turned with her nose into the wind, one fore-paw is raised, her tail carries straight out in a line with her back; out of the corner of her eye she sees the keeper hold up his hand. She drops lower into the heather; a motionless, red-brown body in the purple-pink blossom. If you were near to her you would see her nostrils working, and I think her heart, too, is beating at the same pace as yours. The other gun, beyond the ghillie, is waving to you—not to go straight towards the dog, but to the left. He himself goes to the right, and the keeper is walking up to the rigid, crouching form in the heather. He has come up to her, and you, on his left, and your companion on his right, are waiting. Still the moor is silent, still the sunlight pours on the heather; in the silence there comes from a distant hill the call of an old cock grouse—*B-r-r-r, beck-a-beck, beck, beck, go back, go back, go back!*

The keeper has laid his hand on the red setter's back. She moves a step forward—another step. Where is the covey? Has she made a mistake? You are beginning to wonder. *Whirr-r-r!* And the sunlight is suddenly full of grouse. Seven—eight—nine perhaps, but you do not count them; your eye has somehow picked out one which is

more conspicuous than the rest, you lift your gun at it and a black-and-white ball bounces on the heather ; there, to your left, another grouse is flying a little apart from the others, your eye chooses that one and you swing at the dark, fleeting form ; it changes shape as you pull, and you jerk out your cartridges and load with immense speed for the next grouse.

And what else is there about walking up grouse ? This, to begin with, that you do not walk up grouse only. There will be hares and rabbits ; brown hares on the lower slopes and blue hares on the high ground, which are horribly like long-legged cats ; and rabbits which have a disconcerting habit of dodging about in the little runs made by sheep in the heather. There will be snipe darting up from little boggy places which you will find yourself looking forward to from a hundred yards away, green strips of rushes and sphagnum moss, emerald and tawny and crimson, with clear peaty water trickling and tinkling over heather roots and quartz ; snipe that will jump into the air with a sharp double cry, and which you will suddenly discover one day, after missing more than one, are quite as easy to hit as other birds. There may even be an occasional woodcock ; you will flush him, probably, out of bracken, and the keeper will very likely tell you, before you come to the bracken, what to expect.

There will be greater chances than these. Greatest of all, of course, is the old blackcock. Black-game are not legally shot until August 20th,

but there is an unwritten law in Scotland that you shoot an old blackcock whenever you see him; and when you see him, I hope he will be doing what blackcock should for those who see them for the first time. He will, I hope, get up from above the right-hand gun, a little too far for him to shoot. As soon as he gets up, he will start swinging away to the other side of the glen, and will decide to go right across to a point behind you. This means that he swerves round and comes immediately over your head, perhaps thirty yards up or more; and you, if you can measure his pace, and realise that because he is so big a bird he is going faster than he looks, will drop him behind you, from blue sky into bell-heather.

Or there are mallard. The burn travels the length of the glen, and here and there runs a dark pool unseen till you are close on it. A mallard and his duck will clatter up from such a pool, the drake dull and undistinguished at this time of year in his "eclipse" plumage, but a very happy addition to the "various" column in the game-book. Or, from one of those patches of bog and rushes scattered here and there on the flank of the burn, you may get a chance at teal; easy enough to hit at this time of year, when a pair of them rise from among the rushes. Like the snipe, the teal of August is a different bird from the bird of later in the year.

These are the best of the chances of "various," and perhaps they are the best part of a day's walking; I mean, the fact that you do not know

what may get up next, from a snipe to a fox—for in the Highlands even English Masters of Hounds shoot foxes—adds immensely to the zest of the day. But grouse, of course, are the main thing, and the day would be little without grouse. And they will not all of them be like those of your first point. On a hot day they may lie like stones, but in windy weather or after a storm they may be wild and difficult to get near; or you may be walking down wind and a single bird may flick up suddenly so far out that you have only just time to throw up your gun and fire. Those are the chances that I believe you will learn to like best of all; there is an extraordinary satisfaction in getting your gun exactly in the right place for a shot when you cannot fire a second barrel.

On many moors in Scotland you can only walk up grouse; they will not drive. In the North they lie so close that dogs are a necessity, and in the far West, in the same way, you can walk up grouse all through the season. And for that reason, driving will probably never in such counties as Caithness, Sutherland and Argyllshire take the place of walking; for there are many men who prefer to watch dogs working to having their birds brought to them, and who also like to spread their shooting over as many days as possible. If you can take your holiday from September into October on a walking moor, and practically must end it in September when you drive, plainly a good walking moor will always find a tenant.

And yet the keenest of those who prefer dogging moors to driving would admit that for the quality of its shooting, driving must always take a far higher place than walking. I do not mean to say that you get no difficult shots when walking; there are plenty of them, and you will sometimes see good driving shots do very badly with them. But there is no shot which you can hope for when walking to equal the hardest and most sporting of shots which you get with the driven bird. A driven grouse swerving high up round the side of a hill in a breeze—if you can learn the way of that bird you can shoot anything.

So we come now to the business of grouse-driving. And first of its origin and history. Like other methods of obtaining sport—dry-fly fishing, for instance—it was discovered by chance, or, let us say, developed from an accident. About the year 1805, on a stretch of moor known as Rayner Stones, near Barnsley in Yorkshire, two schoolboys, one named Spencer Stanhope (whose father owned the moor), used to hide behind rocks while the keeper, George Fisher, walked up grouse and put them over their heads. Some thirty years later this method of driving grouse had become the established custom on this particular moor, and in 1836 the first Lord Leicester (the great "Billy Coke of Norfolk," from whom you derive the name of your hat) was one of the guns. The new method then became fashionable, and it was extended and developed by George Sykes, keeper to Mr. Henry Savile at Ryshworth Lodge, who organised drives

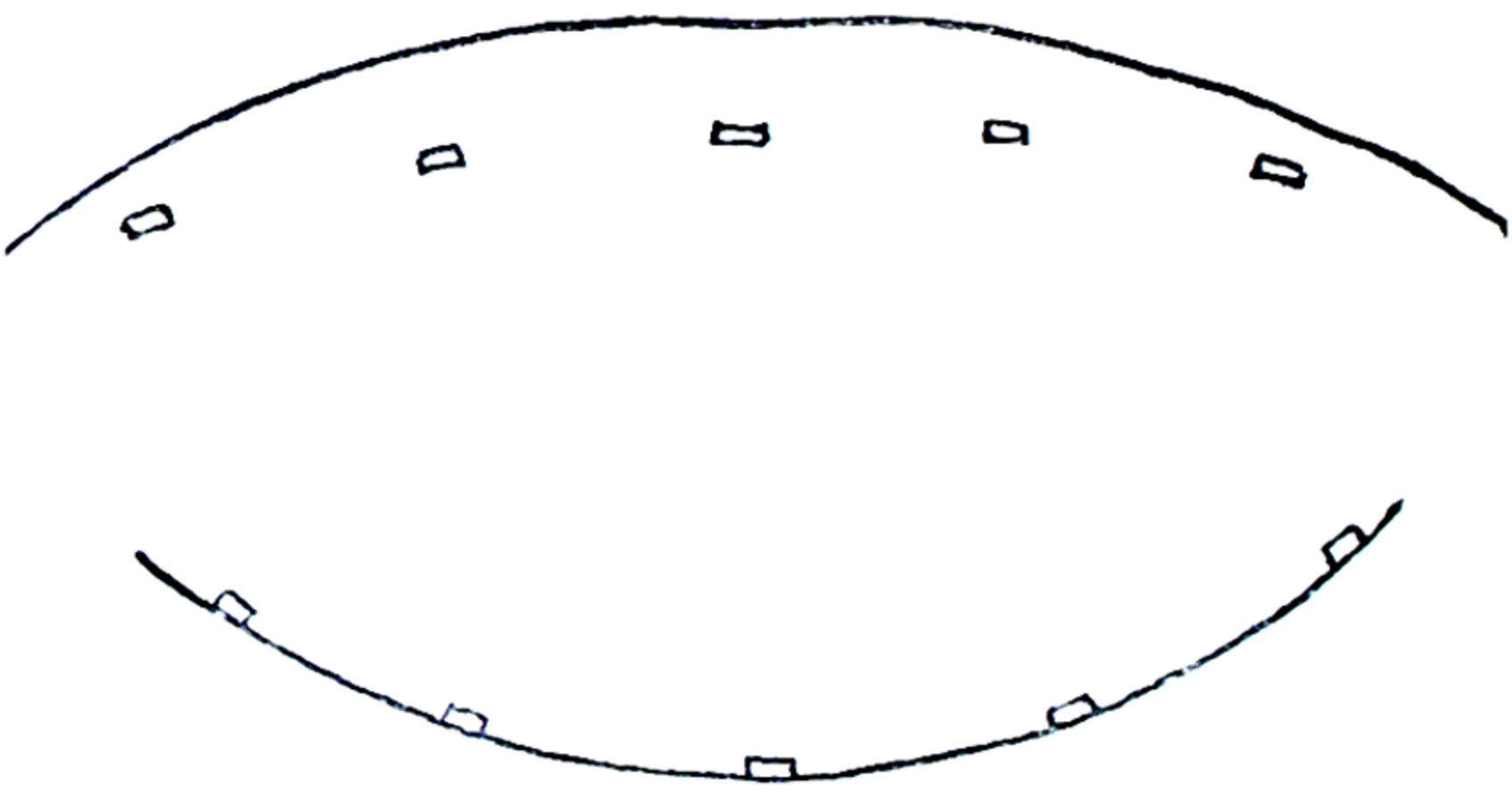
on a larger scale and laid out lines of butts on the High Force and Longshaw and other Yorkshire Moors. From Yorkshire the practice spread to other moors in the north of England and to Scotland, and to-day driving is general. Some moors, even in driving districts, will always be kept by the owners and tenants for shooting over dogs ; but the moors which command the highest rents (a rough test of popularity) are used for driving only.

From George Fisher, walking alone over the heather, the agency which puts the birds over the guns has developed into a long line of beaters, with flankers on either side, controlled by a keeper. Generally the beaters carry white flags and the keeper and flankers red, or the flankers have yellow flags and the keeper a red flag. The keeper marshals his line so as to bring in his chosen stretch of moor, and it is the business of the flankers, posted where the keeper decides they will do their work best, to keep the grouse "in the drive," that is to prevent them from breaking out at the sides. This they do, not by waving their flags continuously, but by suddenly showing themselves when they see a covey or pack of grouse breaking to their left or right, and so turning them in the proper direction over the butts. This flankers' work needs experience and skill—almost instinct. It is most difficult work, and good flanking, more almost than anything else, makes for a successful drive.

But there are other factors in success. One is the position of the butts themselves. Butts can

be rightly and wrongly placed. Generally speaking a line of butts should lie on a convex surface and on the reverse slope of it. They should never be on the skyline, and should not run over a concave. The following rough diagram will explain :—

Right.



Wrong.

The reasons for this are plain. You want the grouse to go over the butts so as to give as much shooting as is possible to each gun. You must not, therefore, place the butts in so conspicuous a position as to frighten the grouse and make them swerve or turn back when they catch sight of them ; you want the birds to come upon them without knowing they are there. You therefore place them behind a ridge instead of along the top of it. Next, grouse when flushed will fly over a hollow at the level at which they start, so that the lowest guns in any concave line of butts would find the coveys out of shot. But—strongest reason of all—experience of the flight of grouse shows that they stream forward

well over convex slopes and tend to break away to the sides and uphill when pushed towards concave slopes. And the first thing to do in "butting" a hill or moor is to watch the natural lines of flight of the coveys when flushed, and then to place your lines of butts so as to deal most effectively with the coveys as they pass. It will be found by watching them that there are certain paths through the air which they prefer to others, and the butts should be placed across these paths. But the level of these paths, too, may differ with different winds. Sometimes the grouse will come forward high along the flank of the hill, sometimes lower down. For this reason you have a long line of butts, ten or more, so that, knowing by experience which level the grouse will choose with a given wind, you can place your guns high or low in the line accordingly.

Next, as to the distance between butts. Forty yards is a good average distance. Butts may be closer together; but if they are further apart, there is the risk of birds going unshot at, between butt and butt, or shot at too far away—as we shall see presently. Here and there it may be necessary, because of the contours of the ground, to place two butts nearer to each other than the others in the same line. And on broken ground, too, butts may be invisible to their neighbours. When this happens, a post should be placed on the highest point of the intervening ground, immediately between the two butts. Each gun then knows where the next gun is standing.

So much for the reasons why a butt should be here or there; and when you get into a butt for the first time, look round and try to understand why it is where it is. But you will be thinking first no doubt of hitting the grouse that are going to come over you; so let us see what we are to expect. The first distinctive thing in grouse-driving, I suppose, is the grouse coming straight at the butt. There is nothing like that in pheasant shooting, and you seldom get such a shot partridge-driving. It is a strangely fascinating shot, a little disconcerting perhaps at first, but afterwards a shot you will long for, look back upon, and long for again. And it is not difficult if you take the bird far enough out; you throw your gun up on what looks almost like a stationary mark, you pull the same instant (if you poke or dwell on the bird you are done), and he drops into the heather. But it is when he is nearer that he becomes more difficult. Remember as you throw up your gun that he is rising to clear your butt, and—I do not know how else to describe the motion—give your gun a lift at his beak.

But hitting these oncoming birds is a knack; it comes by practice. You may get into it at once; you may not discover it for long—though I think you will if you remember that the essential thing is to pull the moment you throw your gun up on the bird. And hitting is not the only thing to think of. Distance is one of the first things to tackle, for the tendency of most people is to let an oncoming grouse get

too near before they fire. When a covey is coming towards your butt, you should try to take your first bird when he is forty yards away. That may seem a long distance, but remember that he is flying towards you, that your pattern is fairly big at forty yards, and that your charge of shot travels in the shape of a cone, so that he flies head on into a stream of pellets. You will over and over again see men take impossibly long shots at birds which have passed their butt, when they will not take what is a safe long shot at a bird coming towards the butt. And if you have dropped your first bird well in front, you will be able to take your second bird also in front, though he will almost certainly, if he was flying near your first bird, have travelled so fast that he will actually fall behind your butt.

That is the advantage you gain—that you need not turn round. For the next thing to remember, after taking birds well out in front of the butt, is that if birds are coming towards you in a regular stream, you should not turn to take a bird behind you. It is better to take them all in front. Of course, whenever you see that there is a gap in the stream, and that you can get in a second or a third or a fourth barrel by turning to fire at a covey after it has passed the line of butts, do so. But if you can see that there are other birds which will be in range by the time you have reloaded or changed guns, do not turn round. You will waste your best chances by turning, and you may find yourself

in that most annoying position of all, firing shot after shot at retreating birds when you could have taken them far more easily and effectively coming towards you.

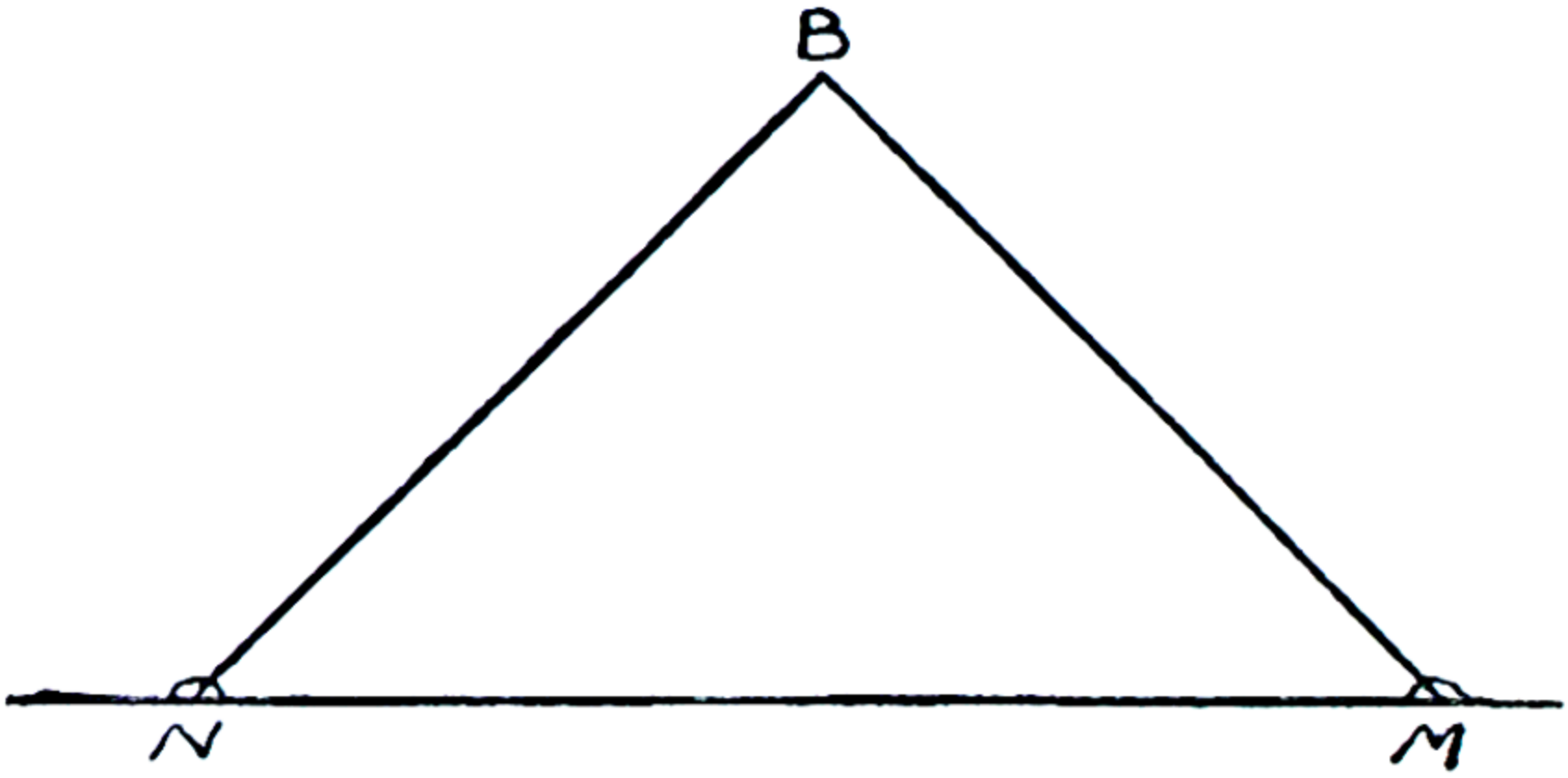
But, of course, not all driven grouse are coming straight towards the butt. You will get every variety of shot imaginable, from the bird high over your head like a rocketing pheasant—and if you are in a butt low on the hillside such a bird may be clean out of shot—to the grouse creeping forward in the teeth of the wind. Grouse flying against the wind travel low, almost touching the heather, and keeping close to the contours of the ground. High and low, fast and slow, crossing, swerving, swinging down the line, there is no angle at which driven grouse may not offer a shot to the gun in the butt.

But there is one angle at which he must never take them. That is when they are near the line of butts, so that your gun would be pointing down the line. Just as in partridge driving, so with grouse; you must never swing your gun towards the line. This, because it is a matter of safety—or indeed life and death—is the first lesson in what not to do which the beginner must learn; and it may be useful, before he is sure of his knowledge of distance and angle, to fasten two sticks, or to place two stones, on the parapet of the butt, so that he cannot swing his gun past them. For there is a particular bird which will tempt him before he gets used to it. That is the bird coming somewhere half-way between his butt and his neighbour's to left or

right, which is too far for him to take when it is well in front of the butts, and which is almost at a dangerous angle before it is in range. The temptation is to wait for the bird, and as it is flying very fast it may cross into the danger-zone before the gun fires at it. When it is close to the danger zone it is best for the beginner—and for that matter for many who are not beginners—to leave it alone. After all, he does not lose a shot. Either there is another bird coming towards the butt at a safe angle in front or he can take the dangerous bird when it becomes safe behind the line.

It is this bird, in reality, which regulates the distance between butts. That is easily seen if you begin with the premiss that every bird which crosses the line of butts should be shootable. Take the bird flying half-way between two butts, then, and plan for him to be within killing distance when he is at a safe angle for the guns to shoot at him. Take this angle to be 45°, and then, if you look at the accompanying diagram, you will see that the distance between butts *N* and *M*, so as to enable both *N* and *M* to take *B*, the bird, at thirty yards, must be something over forty yards. And *N B M*, being a right angle, the greater the distance between *N* and *M*, the greater are the distances *N B* and *M B* ; so that, if you make *N B* or *M B* a maximum distance of forty yards, you get a distance of fifty-five or fifty-six yards between *N* and *M* ; and this is about the maximum distance which separates butts in practice. Sixty yards is too

far; it means that *B* is only just within shot when it can be safely taken; anything over sixty puts *B* out of range, or makes it unsafe to shoot when it is within range; and as a matter



of fact, butts are much more often forty yards or less apart—particularly on broken ground—than fifty.

Not to take long shots at birds passing between the butts, then, and not to take long shots at birds which have passed the butts, are two points to remember. Another. Be careful if you turn to fire at a bird behind the butt, to keep the muzzle of your gun up, and not to swing so that it points down the line. This, of course, is a rule of partridge driving as well as grouse, and it sounds elementary enough. But I have seen, and you will see, old and experienced shots sin in this respect—the kind who habitually carry their guns in a dangerous way, who are always getting out of the place where they ought to be, and who talk without ceasing. They ought

to be shut up, of course ; but they are still at large.

And a note here by the way, on a bird which may puzzle you. If a bird or a covey comes forward and is about to settle, or actually settles, in front of the butt, shoot if it is within range. Take the bird, if you can, just before it settles, for as soon as it settles, its tough wing feathers protect the body. This is not unsportsmanlike. That bird will never come forward over the butts, but will only break back ; and by settling there it tempts others to settle near it.

Three more " don'ts " remain. Your butt is intended to be a hiding place ; it is not a pulpit. Therefore, do not show yourself in it more than you can help. It is an extraordinary thing to see a man with a light-coloured coat and cap, a white collar and a bright tie standing bolt upright in his butt with a mile of heather in front of him, turning birds to right and left, and then to hear him complain afterwards that the grouse did not come forward properly. Why should they come forward to him ? He is just as conspicuous as a flanker, and he has the same effect on the coveys. He might just as well stand out openly in the heather.

Next, remember the beaters. They are just as easy to hit as the grouse, if you point your gun in the proper direction. And so, when you know they are within 150 yards or so (you will often catch the warning flicker of a flag, even when you cannot see so far as the line of men)

be very careful where you shoot. In taking a low bird coming towards you, quite possibly you may be shooting straight at a beater beyond the bird. When the beaters are coming close to the butt, then is the time to wait until any bird which gets up passes the butt. And wait, too, in your butt until the beaters are right up to you and the drive is obviously over. It often happens that a bird or two will squat in the heather until it is almost kicked up near the line of butts, and you may very likely get such a bird at the last moment.

Finally, when the drive is over, unload your gun and leave it in the butt. Do not take it with you when you go to pick up your birds. You may think that you have a wounded bird down which will possibly get up, but you must not go after it with your gun. "No shooting between drives" is an almost invariable rule, partly because of the danger involved in putting up and firing at birds which may fly in any direction, and partly because the ground where the bird has settled may be wanted to be kept quiet for the next drive. If, therefore, you should happen to have a bird which has gone down wounded a long way off, tell your host (only be sure that it was really hit and is not a strong, healthy bird which settled in the heather merely because it wished to do so), and he will decide whether you should go after it or no.

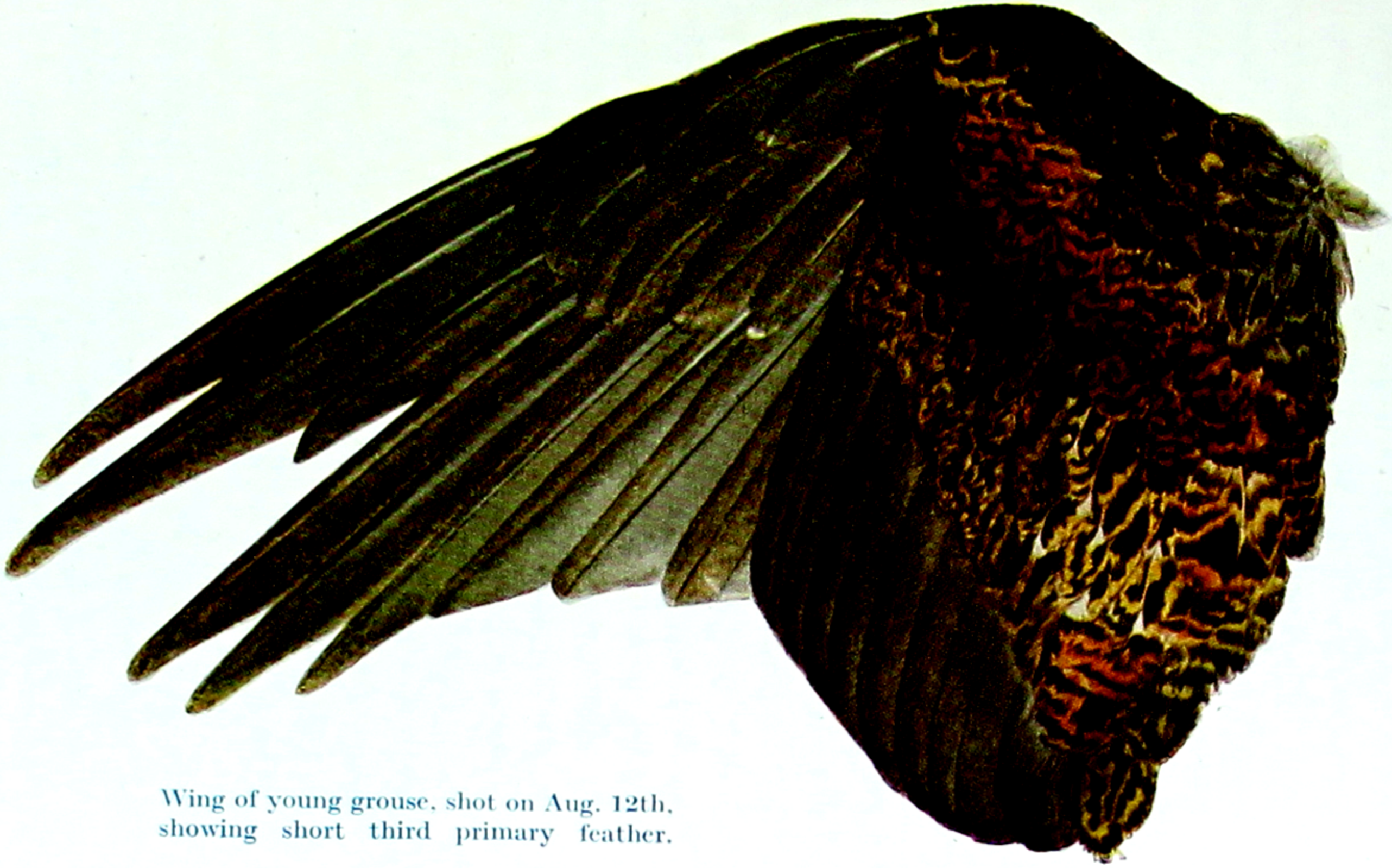
And a word here as to the pick-up and its unwritten laws—to know what you have down, to pick up your birds and no one else's, never to

say you believe you have more down than you know you have, never to dispute the possession of a bird with a neighbour. The pick-up, I always think, is the one drawback to grouse driving; the single fly in the ointment, and still able to sting. How quickly we may judge our neighbours after a grouse drive, and how certainly we must be judged ourselves! The man who hurries out, and sends his loader out, the moment the drive is over, to collect all the birds which he knows he has down, and some of those which he thinks he may have down, and which are so easily mistaken for someone else's—do we not all know, have we not all suffered from him? The man who, having originally said that he wanted ten, say, and on being confronted with additions, apparently unclaimed by his neighbour, alters his number to eleven or twelve; the man who always asks for a dog to look for birds that have fallen dead in the blue distance behind the butts—do we not often meet both of these? And do we not all of us bless the tolerant, the quiet, it may be the obese, who, having shot their birds allow keepers and dogs to pick them, or wander genially themselves, asking whether this or that bird is theirs or yours? Gladly do we present birds to such amiable companions; gladly, enviously do we regard them when neighbours remove their rightful property and their only comment on the theft is, "My dear fellow, what *does* it matter?"

But it does matter—to you. Be very sure that when you go out to the pick-up for the

first time, and indeed, every time, until you are known by your neighbours, you will be watched. You may not notice it, but your neighbour to your right and left will be observing the way you gather your birds—whether you are quiet and unselfish and willing to allow that this or that bird may be someone else's, or whether you are anxious first and foremost to get your own number, and careless as to whether anyone else gets his. If you should proclaim in a loud voice that you have, say, ten down, and that you know exactly where they are, and then pick up a bird which your neighbour thinks is his; or if you should ask him, looking for a bird that cannot be found, whether he does not remember your bird, which was very high and fast, and not at all like his, which was a different kind of shot and fell nearer the butt, these things will be remembered about you. Do not be so remembered.

But I want now, with these preliminary "dont's," to try to give you some idea of what it is which sets grouse-driving, in my opinion, at all events, in a category of its own, apart from and above all other forms of shooting in these islands. And I suppose that in the first place, it is the variety and the interest of the positions in which you find yourself, with the variety and the interest of the shots which you get, which is the secret. In no other kind of shooting, not even snipe-shooting, do you come to so many different sorts of beautiful places, nor are you offered so many different and difficult sorts of shot.



Wing of young grouse, shot on Aug. 12th, showing short third primary feather.

You begin with your different forms of experience from the moment you set out for your butt. And one of the pleasantest things in all shooting is to come to a grouse butt for the first time. There is so much that you cannot know till you get there. What kind of butt will it be? Will it be well built, solid, roomy, well drained, perhaps with a wood floor, or will it be cramped, uncomfortable, muddy, slippery, cold? Where will it be in the line, high up or low down, in the centre or on the flank? What kind of an outlook will it have? Will you be looking out over miles of moor, so that you can see the whole drive develop before your eyes, or will you be just under the brow of the hill, so that you can see nothing until the grouse are right upon you? And what sort of ground lies before and behind the butt? Is it an even stretch of short heather, on which you will be able to see your birds at once, or is it long heather or rocky ground, which will make the pick-up difficult after the drive? It is not until you are actually standing in the butt that you can find the answer to all these questions, and that is why the pleasure of coming for the first time to a line of butts and finding the one which is yours for the drive is always new.

Is the butt well built? That question comes first, not because one cannot enjoy shooting out of almost any kind of butt, but because good or bad building does make a difference to one's shooting, and also because there is no reason why every butt should not be built comfortably

and well. It is merely a matter of taking trouble; a good head keeper will see that the butts are what they ought to be, and a lazy or careless man will take no trouble about it. Roughly speaking, there are two kinds of butts, one which is needed for grouse coming only one way, that is, which need only face in one direction; and the other for drives and return drives—that is, facing in two opposite directions. For the first kind, all that is absolutely necessary is a pile of sods or stones like the section of a wall; but that is not all that one hopes for. A butt built in the form of a half moon is better; better still, a butt with two good solid sides—an addition which you appreciate (and so does your loader) when there is a wind blowing. For the second kind of butt, needed for a return drive, you want a nearly square enclosure with an entrance at the side. I like a square butt better than a circular, as giving more space; your loader, if you have one, wants plenty of room when the birds are coming fast; and if, in addition, you have a companion—particularly if she is the companion you prefer—you will want room for her to sit comfortably, too. And that brings you to consideration of the floor of the butt. It must be well drained—that is essential. Nothing is more horrible than to have to stand in puddles or on sloppy, slippery peat, and nothing spoils your shooting more than to be unable to get a firm foothold, or to turn quickly to right or left. In some places you can get good, dry footing merely by giving the floor of the butt a slight fall to the opening; and I

think, myself, that there is nothing better to stand on than dry soil roughened with grit, which you can often get on a rocky hillside. But in other places, especially if the slope of the ground drains down to the butt, or if the floor has to be cut out of peat, nothing but a floor of planks is really satisfactory, and for dry planking after a walk to the butt over wet ground I lift my cap in gratitude to the man who put it there. As for the sides, they may need casing with wire netting to keep them in position, especially if there are sheep on the moor; and then I look carefully on coming into the butt to see that the sharp ends of the wire have been turned inwards, and do not offer rusty pin-points to my wrists or the polish of my gun.

One further detail you may think worth noticing. When the parapet of the butt is made of sods, there are often straggling pieces of heather or bents of grass on the sod which wave in the wind: I like to remove them. Or if the butt is sunk or cut out of the side of a gully—gullies are very useful as sunk roads to help the guns to get to their posts unseen—there may be plants growing in front of you which break the view. One such butt I found myself not long ago, and as I climbed up into it and looked out over the parapet to the rim of the brae I was suddenly conscious of twenty dark dots swinging and swaying on the skyline, precisely as an oncoming covey may fly low and swerving against the wind. They were not grouse, but the heads of rushes, and I had hardly cut them down and got back

into my butt before their places were taken by a real covey coming forward—one of those early arrivals which so often discomfit the casual smoker of cigarettes, secure in his belief that the beaters cannot yet have lined out for the drive.

Hot sun and wind may add a difficulty. If the parapet is old and dry, and you are facing the wind, a gust may fill your eyes with dust; or the sods on the top may have been taken from burnt ground, and as you put your gun on the parapet the wind will puff charcoal into your face. Charcoal obscures vision. It is well, on gusty days, to tap a dusty parapet standing up wind.

Butts may be bad or good for other reasons besides their construction. They may be badly placed; they may even be dangerous. I have in mind an uncomfortable moment on one occasion when I suddenly realised that my left-hand neighbour was not where I supposed him to be, but away to what I thought was my left front. The reason was that there were two lines of butts, nearly, but not quite, parallel, which ran close to one another, built for two separate drives. I had never been in either line before; I was invisible to my right-hand neighbour from where I stood, and I could not see my left-hand neighbour get into his butt. Fortunately he lit a pipe when he got in, otherwise he was indistinguishable from his background. But I think I have only shot in one really dangerous line of butts. In this (I believe it is still standing) the butt on the left flank—call it No. 9—is thrown

forward, and though it can be seen from the butt next to it, No. 8, it is invisible from Nos. 7 and 6. The line, therefore, makes a curve like a crescent. I do not know when the occupant of No. 9 was last shot, but I believe it is still held on that moor that for that particular drive you cannot put the birds properly over a straight line of butts, and No. 9 therefore remains.

Then again, it may happen that the butts themselves are well made and that you get excellent shooting from them, but that they are badly placed because of the difficulties of the pick-up. One drive on a Welsh moor I remember for the beauty of the view ; you looked in front of you only at ling and sky, but behind you was a glorious ravine of pink and purple heather with a stream at the bottom, and the very place for a young ladies' sketching club, but perfectly distracting when you had dropped dead birds fifty yards below the butt into heather three feet high. Another delightful drive I know in Perthshire, where the shooting you get in any one of the butts in the line is first-class, and where, in the lower butts, the grouse come as high as you ever see grouse—often enough clean out of shot. But the drive is spoiled because behind it lies a tumbled mass of boulders, into which bird after bird goes down, and over which dogs cannot work. I suppose that ten or twenty per cent. of the birds killed in that drive are lost. On another Perthshire moor I recollect a line of butts which was badly placed as regards the distance for the pick-up, for many of the birds fell far down hill—

though the heather was short and they could be seen—but which, as regards one particular butt in which I found myself, was, for me, at all events, quite impossible. The butt was built into the side of a rocky hill, and the rocks sloped sharply up in front and to the right, so that as soon as you saw the birds they were right on to you and you could only take them to the left or behind the butt. But to the left and behind the butt the ground sloped almost sheer, and for me that meant that whenever I turned round I felt like falling over a precipice. I have no head for heights, and this was standing on the edge of a cliff and shooting into nothing. For others, perhaps, this butt might have been as well placed as any other; there was, indeed, another gun who occupied it, and described it as having afforded him a new sensation—he had never shot birds that fell so far out of the void. But for me the only sensation was one of misery. I could not keep my balance. I shrank from shooting. I prayed for the end of the drive.

I remember that butt, however, as a butt of individual character; it stands out from others with a distinction of its own, even though it is a distinction of unhappiness. And it happens, somehow, that few butts have this individual character. That means, I suppose, that the great majority of them are rightly placed; they give you the grouse coming as they should, and you are not conscious of marked differences and peculiar necessities or conditions. Yet there remain some which stand out from memories of

long days very separately clear. One is the flank butt on the right hand of a line sloping down a hill on a Forfarshire moor, to which there came on two occasions a delightful ending to a drive. Not only was the weather perfect all day—and how much a good light means to the shooter !—but the drive provided a surprise. The birds had ceased to come from in front, and the drive seemed to be over, when a new lot came over from the left, swinging down the line instead of across it, and giving the right-hand gun those unexpectedly high birds which are one of the chief charms of grouse driving. Another lot followed, and another ; could any finish to a morning be better ? If it could, it was the finish of the same drive a year or two later, when, as luck had it, I had the same butt and the same thing happened. Who could forget that butt ? It is always in my mind with hot sunshine and blue sky above the brown peat of which it was built.

Another butt which I associate with sunshine has somewhere about it a queer quality of dreams. It is half-sunk, and you get from it an almost circular view of short heather—heather which ends with a rim of flowers against the sky ; and as I see it the sunshine pours down all round it, bees drone in the bloom, and along the rim, with its tiny pink flowers, hares canter like cats. I cannot bear shooting hares, and, fortunately, as I remember that butt, they canter out of shot.

If I think of another butt, which happens to be on the same moor, it is because of the extraordinarily difficult, and also extraordinarily good

shooting which it provides. You are just under the crest of a rounded hill, and can see no other gun, only the warning post against the sky which shows you the line of the butts. The birds swing round the hill from your right front, and as they come into view they suddenly scatter —it feels as if they had swerved at the sight of the gun on your right. But they scatter like partridges, to swing together after they have passed you, and as they are high in the air and have been long on the wing they make about as disconcerting a manœuvre of it as any covey of grouse could contrive. Except that they do not dart upwards in the same way, shooting at those coveys is something like getting in your second shot at a bunch of teal. The covey explodes, breaks to pieces, and in a second has come together again and swung on behind you.

A butt made of boulders, among boulders, with boulders in front of it and boulders behind—that is another butt which, although in its opportunities it is very like others on other moors, keeps its separate niche of memory because of two sights that went with it; one, a loch half in shadow and half in sunlight, the southern end a golden glitter and the northern a dark mirror spangled with the circles of rising trout; the other, coveys of grouse crossing the glen from the top of one hill to the top of another. Grouse sweeping off high ground into empty sky and making for a point far away, and as high as the ground they came from, carry with them, for me, an extraordinary sense of purpose and

power. They must know what they mean to do, and they must have a leader.

I remember that butt, too, for the quick way the coveys swung round the top boulders and came curving on, keeping the contours of the hill. I suppose that in most drives the butt which has the biggest pick-up is one to which most birds come in the same way, at the same angle and the same pace, to be taken all at the same place by the gun. Here they were all swinging in from right to left. Two other butts are in my mind with recollections of birds swinging round the shoulders of rocks in this way, but they are distinct because with these two the birds swung in both ways, from right to left and left to right. In each case the butt stood at a distance from a big hump of rock topped with heather, almost a hill in itself, and in each case it was the most killing butt in the line. Coveys and single birds swung one after another into the same space opposite the butt, first from one side and then from the other. But the second of these two butts has a separate individuality for another reason. The rock, or hillock, in front of it is in reality a big lump in an uneven stretch of ground, full of gullies and hollows, and the butt is built into the side of another hillock, with a gully running at its foot. So that you ascend, as it were, to a sort of balcony and look out over miles of heather to the right of the hillock in front of you, and when the coveys begin to arrive they are suddenly and silently in the air on one or both sides of the hillock. Some coveys,

indeed, settle on the other side and come running to the edge of the heather and peer over at you; these, of course, always go back. But the whole place has somehow a curiously stagey atmosphere about it; when the grouse fall into the gully you feel as if you were in the front row of the dress circle and had dropped them into the pit.

One capital purpose the gully fulfils: it makes the pick-up simpler. It is a definitely circumscribed situation easy to keep in mind. For, of course, one of the difficulties of any pick-up is to remember where your birds have fallen. You may know for certain how many you have down, but it is a different matter to be sure where they are. There are cards, I know, recommended by authorities whom we should respect; cards marked in squares, with the butt in the middle, on which you or your loader, or both, are supposed to jot down each bird as it falls; but I have never succeeded myself with these devices. And, indeed, when birds are coming really fast it is difficult to understand how anyone can use a pencil and paper and keep his eyes where they should be, or how, even, he can put down his gun. As for your loader, he is much too fully occupied. What he can do is to mark a bird now and then which has gone down behind the butt, when you have had to take your eyes off it for others coming forward; and if he can mark it by some rock or tree, or lump in the heather, so much the better. That is why it is an advantage, sometimes, to have uneven ground round the butt. The ideal ground for picking up is, no doubt,

short heather in front of and behind the line, but sometimes a hollow, or a gully, or a patch of rushes or long heather, helps the eye and the mind. "So many in front and so many behind" is as far as we often get in counting; but when we can say to ourselves, "Three in the gully, two behind the white stone, one in that black piece of heather," and so on, we have something better to assist us, and we can tell where we still have a bird missing. One of the difficulties of any pick-up is, of course, the mere accident. A dog, a keeper, a boy may pick up a bird without your seeing it; or your loader may tell you he has picked a particular bird and you may discover that he has not. Once at the end of a drive I asked about a bird which I thought had not been picked, and was assured that it had. Just then a boy, standing where I thought the bird should be, called out, "No, here is your bird," and held up a grouse, only to add: "No, it isn't, it's been dead a long time." And he threw it down—on my bird, which was lying in the heather at his feet. So that in that single spot, in two consecutive drives—for the ground had been driven a week before—two birds had been left after the pick-up was over, and the second was actually only discovered by the accident of picking up the first.

And what is the ideal butt, ideally placed? Should it be a butt with a view far and wide, so that you can see the birds get up a long way off and watch them coming towards you? or a butt close under the skyline, so that you must snap

at the birds the moment you see them ? or a butt which is something between these two extremes ? Here, of course, we come to a question of individual tastes. Some men shoot best when they are compelled to " snap." For myself I have no doubts ; there is a particular distance between the skyline and the butt which seems to me ideal. There is a great pleasure, I own, in watching the whole of a drive develop before your eyes, to see the beaters and flankers take up their places, and then the line of flags flickering over the hills, appearing and disappearing in folds of the ground ; to catch sight now and then of flags wildly waving, as coveys get up before the line ; and then to watch the black dots of the on-coming coveys swing forward, swerving, crossing one another, until they grow one by one into big, rushing birds at which you must shoot, having watched them on the wing for, perhaps, the best part of a mile. There is a great fascination in that. On the other hand, I think that to see a covey or a bird for a very long time before you have to fire has a tendency to make one slow, and I believe that is particularly the case when one can see that, as must often happen, there is no other covey near it.

Is it better, then, to be so placed that one can see nothing of the drive or the coveys until the moment when one has to shoot ? That, I think, is going to the other extreme and spoils many chances. Personally, I hate being able to see nothing at all but a small expanse, like a blind wall, of heather or rock, and I believe that the

tension of having to wait, it may be, half-an-hour or more, staring at sky and heather with one's gun perpetually ready is tiring and makes for bad shooting. Best of all, I think, is a position which gives one time, but not too much time, for shooting, and enables one at the same time to tell pretty well what is happening in the drive. Such a position you may sometimes get half-way up the flank of a hill, when the hill curves away from you, perhaps fifty yards away, so that when you first see a bird he is about that distance off, and when you can look down half left or right, as the case may be, and see how the birds are coming to the other guns. A covey fleeing by out of the reach of the gun on the flank may very likely give you that warning of the beginning of the drive which is so valuable, and which, if you had not been able to look about you, you would not have got. And I like a distance of fifty yards or so in front of the butt, because, although you are not hurried and can choose your birds, you have to throw up your gun and shoot at once ; also, you do not know whether or not there are other birds coming and so you are not tempted to take time over your first birds. Yet you are still able to know, as the birds pass your butt, whether there are others coming in front or whether you can turn round and take a bird behind you.

This, then, I believe is the ideally placed butt, and naturally you cannot always, or indeed often, get it. When there are nine or ten butts in a line they cannot all be pleasantly placed,

some must be better than others. And that may remind you, as it does me, of butts which were not butts—mere hiding-places behind a wall, a stone, a whin, chosen for an impromptu drive, perhaps, arranged at an hour's notice with the keeper, when the river was in flood, possibly, or too low for fish to run up. Such memories, rare or frequent, become the more distinctly framed for their very unexpectedness, for the accident which produced them. I remember few grouse more vividly than two that belong to a day which was set apart for fishing, but which was changed to a day of partridges and pheasants, with a strip of moor to be driven on the chance of a covey. There was a covey of nine there, and they swung half a mile down wind over a wall, exactly right for one of the two guns behind it. One of the covey bowled over and over the short heather and hit the wall, and the other tumbled thirty yards behind the wall in oat stubble—the best of luck with the unlikeliest of chances, and, remembered as gratefully as the most carefully built of butts, a plain farm wall.

Reminiscences suggest conversation—the kind of talk you will hear at lunch in the heather, or in the lodge at the end of the day, when we are thinking, most of us, that we might have done better, wondering why we did not do better, and acknowledging to ourselves, if we are in an honest mood, that we do not expect to do better. You will often hear it said of a good shot—it is as common a shibboleth as that other, "three dead in the air"—that "he nearly always gets

two in front and two behind." Well, he doesn't. It sounds very well, but in practice it does not happen. In the first place, if there are a lot of grouse coming, he does not turn round to take them behind him at all. In the second place, if the grouse are coming fast, it cannot be done—not, that is, with a single covey. I do not mean to say that it does not often happen that a good shot will be able to take two birds with his first gun in front of the butt, and then, seeing that there are no more birds coming forward for the moment, will be able to turn round and take two more with his second gun behind the butt. A good shot can do this, but he cannot do it with a single covey if it is coming fast.

The thing is a matter of simple mathematics. Begin with the pace at which the driven bird flies. Birds, like men, can go at different speeds. A man can run fast or slow at will; so can a bird fly. And to determine the pace of game birds under ordinary circumstances, the *Field* in December, 1886, carried out a series of experiments with partridges and pheasants, which proved that over short distances, measured from the point where the birds were liberated, partridges would fly as fast as thirty-five miles an hour, and pheasants thirty-eight miles an hour. It is safe to assume, then, that either of these birds when well on the wing under natural conditions and in surroundings familiar to them (instead of being released from confinement, as they were in the case of the *Field* experiment, in a place they had never seen), would reach a

speed of more than forty miles an hour—probably the pheasant, indeed, would fly far faster. And since a grouse is a bigger and heavier bird than the partridge, it may be assumed to fly faster—for the old maxim holds good with game birds as well as others, that "the bigger the bird the faster it flies," or, at all events, the faster it can fly. We shall be within the mark, then, if we calculate that a driven grouse flies at a rate of forty miles per hour. And we are leaving out of our calculations the pace of the wind.

Next assume that a bird is in range forty yards in front of and forty yards behind the butt. A covey of grouse, then, driven over the butt is within range while it travels eighty yards. But if it covers forty miles in an hour, it covers eighty yards in 4·09 seconds. Can the quickest and best of guns get off two aimed shots in front of the butt, change guns, and aim two more shots behind the butts, inside that time? In the *Field* of January 18th, 1923, there was published a letter from a well-known shot, Major C. E. Radclyffe, who had tried a number of experiments in order to find out the time that it would take him to fire three and four barrels under various conditions. His shooting was timed by a friend, and he found that he could get off two barrels in front of him in $\frac{4}{5}$ second, but that to change guns and get off two barrels behind, took $3\frac{3}{5}$ seconds, so that the whole four took $4\frac{2}{5}$ seconds. By the time that the fourth barrel was fired, then, our imaginary grouse would *ex hypothesi* be out of shot.

Now, these figures of pace and distance of birds are, of course, only approximate. Grouse do not fly at exactly forty miles an hour, and I do not say that it is impossible to kill a grouse further away than forty yards. But it is obvious that only the finest and quickest of shots can hope to get four down out of a compact covey flying at any pace near forty miles an hour; and if you add any wind to increase the pace of the birds, the feat at once becomes impossible. The original *Field* experiments were purposely made on a windless day. But suppose that behind the grouse there were a twenty-mile breeze. Then the covey would be flying sixty miles an hour, and would cover eighty yards in 2·72 seconds. Nobody could hope to fire four aimed shots, changing guns after the first two, in such a space of time. It is, indeed, only when grouse are coming against the wind—which they will do on a return drive, when they want to get back to the part of the moor from which they were originally driven—that it becomes feasible to fire four barrels at birds in a compact covey with reasonable hope of getting four birds down. A twenty-mile wind is a stiff breeze into which to drive grouse, and quite possibly they would not face it; but if they did, and were only travelling twenty miles an hour there would be plenty of time to get off four barrels at the covey. But I believe that when grouse are fighting into a strong wind they are going at a pace which, if there were no wind, would be more than forty miles an hour. They are flying their

hardest, and that is pretty hard, for they are strong birds—as you may decide, perhaps, after your first grouse-drive in August; to be convinced that there is no more vigorous or impressive game bird, when you have the luck to return to the moor for that most difficult and inspiriting business, grouse-driving in October.

CHAPTER VIII.

SNIPE

THERE is a country name, "heather-bleater," for the Common Snipe (*Gallinago cœlestis*); and I suppose that there may be many men who have shot snipe and have never heard the name, nor would recognise the sound which gives the name to the bird. For the snipe "bleats" or "drums" only in the breeding season, and a man might shoot all through the winter and come away from the snipe marsh or the rough wet heaths where the bird nests without knowing that the bird could be capable of producing any other sound than the quick double cry which it utters when it springs from the ground.

"Bleating" or "drumming" is a sound of spring, and to me one of the most fascinating of all the year. I do not know how many hours I have not spent listening to the rise and fall of the sound, and watching the soaring and swooping of the bird in the air. I do not mean to say that you will never hear a snipe drum except in spring, for I have heard them drumming in every month from January to August; but the four months of March to June are the chief for snipe, as they are, of course, for all sounds of

mating of birds. And what exactly is drumming ? If you go out on a spring day in any stretch of ground where snipe breed, you will hear somewhere above you, repeated over and over again at regular intervals, a sound like a sheep or goat bleating ; many people, no doubt, before now have heard the sound and thought no more about it except that there must be a sheep somewhere near which they could not see. But if you look up you will see the snipe. He will be flying in a big circle, high in the air : you will see him mount up with a strong beat of his long wings, and then turn in the air and shoot down at an angle of, say, forty-five degrees ; and as he shoots down you will hear a long-drawn, wavering bleat, as like the bleat of a sheep as any noise can be. Up he soars again, down he swoops again, and round on his big circle he goes, with his mate or his nest in the centre of it below him ; the bird is in an ecstasy, and you, too, will feel something of the pulse that thrills him, hearing that sound for the first time in any spring.

And how is the sound produced ? Years ago, there were two or more theories, you might almost call them schools of thought—as regards the snipe's drumming. One was that the sound was vocal ; was made in the bird's throat. Another was that it was made by the vibration of the primaries ; many well-known naturalists were convinced that they saw the wing feathers quivering as the bird swooped, and that the sound was made by the air rushing between them. Others thought that the tail feathers in some way

contributed as a sounding-board for the wings; and so the dispute went on until a Swedish naturalist, Meves, showed that by fastening the two exterior tail feathers to a stick and whirling them round, the sound could be reproduced almost precisely. And to-day, I suppose, no one doubts that it is these two tail feathers which make the sound.

Anyone can convince himself of this by the simplest of experiments. Take an ordinary arrow and bore two small holes at right angles opposite each other near the feather, and parallel to the notch. Into these fasten with sealing wax or seccotine the two outside feathers of a snipe's tail. Shoot the arrow into the air (you must place the tail feathers parallel with the notch of the arrow, and flat in the same plane as the drawn string of the bow, so that they may not hit the shaft of the bow), and as it descends you will hear the exact reproduction of a snipe's bleat or drum. You could not tell the difference, until it suddenly stops as the arrow strikes the ground. You will even hear the curious break or tremor in the drum which is so noticeable when you are listening to the bird, and though I do not know that the theory has been accepted by others, I have suggested in a former book, *Shooting Days*, that this tremor is produced by the play of the air along the web of the two tail feathers. For if you look at the feathers, you will see that they have a wave in the web something like the screw of a steamer, and if you shoot the arrow several times, you will find that the shape of the web is

a little different each time you pick it up, as if the sound were travelling along the wave of the web, and were stopped as the arrow struck the ground.

In the accompanying plate I have drawn the feathers of a snipe's tail as the snipe spreads them when he drums. You will see that the outer feathers are extremely strong at the base, and taper beautifully to the tip. Notice that there are fourteen feathers in all; the Great Snipe, one of the two other British species, has sixteen tail feathers, and the Jack Snipe twelve.

Snipe are both migratory and resident in Great Britain. The majority of those which we find on a snipe marsh in winter are migrants from Northern Europe; but the numbers vary considerably in different years. In hard winters we get many thousands, but in mild open seasons such as the winter of 1922–3 very few visit us. In any case, however, we always have our own resident population, and these (as is also the case with woodcock) are probably increasing every year in consequence partly of the restrictions of the Wild Birds Protection Acts, and also, I think, because more and more people are coming to realise that though it may be legal in many places—the date varies with different counties—to shoot snipe and woodcock as late as the end of February, it is in reality a barbarous business to do so, whether the bird is resident or a migrant, since in either case the breeding season is beginning or has begun. For snipe, of course, like other birds, pair some time before they actually start their nest.

The nest is little more than a hollow lined with a few bents or grasses. Rushy ground is a common site, and four eggs are laid, of a distinct, tapering shape, olive in colour, and handsomely slashed with purple and brown. The mottling and slashing of a snipe's egg often has a curious spiral twist, as if the egg turned in the oviduct in the process of receiving its pigment. The young when hatched are delicate, downy, slender-legged little things; but one cannot have the heart to examine them for long with distressed parents close at hand. Snipe, like plover, will swoop near your head if you come close to their little chicks crouching among the rushes.

And all through the nesting season the snipe drum. Both cock and hen drum till the hen begins to sit hard, and I think there are few sights or sounds in spring to match a pair of snipe careering above their chosen home in the marsh, answering drum with drum, swooping and tumbling in blue air over the milkmaids and kingcups in the rushes. But the drumming is not their only sound of courtship and mating. You will hear from the neighbourhood of a snipe's nest—it may, perhaps, be the first hint that you will get that a nest is there—an agitated call something like "chick-chick-chick-chick." This is peculiar to the nesting season, and though it sounds like a cry of warning or of nervousness, it cannot be so in reality, for you may hear it at any time by day or night, and when there is plainly no reason for anxiety—unless, indeed, the bird never ceases to be anxious. Sometimes it is

accompanied by a curious nodding or pecking motion of the head and neck, a little like the odd movements of redshank when they stand about in their nesting colonies and look as if they were talking to each other about the various problems of mating and managing. You may see this pecking motion particularly clearly when, as often happens, the bird chooses the stump of a tree, or a post in a line of railings, on which to perch.

And this habit of perching, by the way, is in itself worth noticing. Snipe, of course, belong to the plover tribe, and are birds of the ground; but they like to alight on a smooth surface where they can look round them, and you may even see a snipe fly to the top of a tall tree, if there is a dead branch on which it can stand. I have never seen a snipe perch on a live branch; like other ground-nesting species—redshank, for instance, and meadow-pipits—it seems to select dead wood as a suitable lighting-point, possibly because a dead branch stands out naked to the air without thwarting leaves above it.

If I put grouse-driving first as the finest form of shooting to be had in these islands, I shall still put snipe-shooting first as typical of the sport of shooting at its best. For it is a sport of wild and solitary places; it demands great skill with the gun; and it imposes hard conditions of work and endurance on the shooter. No one who is not physically fit can shoot snipe. You may find it a stiff climb to your grouse-butt, but when you have arrived there you have time to rest and



Snipe's wing, showing position of pin-feather.

you get sound footing. Walking for snipe, on the other hand, may mean rough travelling all day long, and shooting under the most difficult conditions. Driven grouse offer the hardest and most sporting shots of all wild birds; but the shooter has the best chance of dealing with them, and with snipe he often has the worst.

And as for beauty of surroundings, you may look from your grouse-butt over the splendour of a Scottish glen, with the loch below you, perhaps, and blue hills beyond. But part of the beauty is of the autumn and the sunlight; and you share it, too, with others, you have the pleasure of companionship to add to the sport of the day. But the beauty of the places you come to in snipe-shooting is lonely, difficult, savage; you have winter weather about you, and rain and wind, and flood water; the hills are less often clear than swept with mist and cloud, and before you, unless you know your ground, lies the green treachery of the bog.

Not that snipe-shooting belongs only to the wilderness. There are snipe in every county in the kingdom, and nothing adds a sharper zest of change to a morning's walk after partridges, or a mixed day in October, than the knowledge that you will be coming in due course to the bog, or the wet ground by the stream. But the true background to snipe-shooting is the hills—the hills of Wales, Scotland, Ireland. I do not know which I would choose first; glens in Argyllshire within scent of the Atlantic, Pembrokeshire and its dark heather, the black peat

under the chasms of the mountains of Connemara. But to Connemara, its beauty and its cruelty, I suppose I shall never come again.

Much has been written about snipe-shooting, and much copied by one writer from another. Take, for instance, the rendering which is usually given in print of the cry of the snipe when he rises from the ground when you walk him up. "The familiar 'scape-scape'"—you will not be able to avoid that phrase if you read much of the literature that has accumulated round the subject of snipe. Yet "scape-scape" is a sound which is quite unfamiliar to me on the bog, however often I have met it in books. I have never heard the guttural *c* or the labial *p* in the cry, and will confidently assert that neither is there. What I hear I cannot write down exactly in letters, but it is something like "snaitch." I am sure there is something nasal in it, and something akin to dental. And is not that, after all, what they heard, who first gave the bird his name? In the old books you will find the snipe called "snite." And I believe that just as the Latins named the screech-owl "strix," and the turtle-dove "turtur," and just as we call the plover "pee-wit" and the chaffinch "twink" and "spink," and have only one name for the chiff-chaff, so snipe is onomatopœic, and came in the beginning from the cry of the bird.

Another convention has attached itself to descriptions of the bird rising. You read that a snipe always hangs in the wind for a moment before darting off, and that this is the moment

to take him. Well, a snipe does not always hang in the wind. The assertion that he does so is borrowed, I suspect, from Hawker, or rather from what Hawker is supposed to have written. What Hawker really writes is that you should select a windy day for snipe-shooting because on such days snipe "usually lie better, and, on being sprung, hang against the wind, and become a good mark." But by "a windy day" he means what he says; and we often shoot snipe on days when there is a wind, but which cannot be called windy days. And on such ordinary days snipe get up in all sorts of ways; but the commonest, I should say, is to dart forward near the ground and then to jink to the right or left. There is no "hang" anywhere, and if you wait for a hang the bird will be gone before you shoot at all. I believe there is no rule for shooting at snipe except simply to throw up the gun and snap at the bird as soon as you see him; and I have often thought that you get exactly the same kind of shot when walking up grouse, when a bird gets up a long way off and you must take it the moment you see it. There is no swing needed, but a kind of lift, so that the act of bringing the gun home to the shoulder and pulling is one motion.

But the real difficulty in snipe-shooting is a thing apart from the bird. A snipe is a tricky mark, but you will get into the trick. What you will never do is to be sure of your footing. Of course, if you are out with a dog to find your birds for you—and under certain conditions that

is the pleasantest form of snipe-shooting—you can generally manage to pick your way when the dog is pointing, but even so, you will often be stepping over uneven and slippery ground, with your eye on the line down which the dog is getting the scent. When you are walking up snipe by yourself, however, or with another gun, you will be going continually over ground which would be difficult walking even if you were carrying a stick instead of a twelve-bore, and you may expect to have to shoot with one foot in water and one in mud, or standing on something which moves with your weight, or standing, indeed, on nothing, but falling from something to something else, on one leg possibly, perhaps on neither.

To walk forward confidently under these conditions is a matter of instinct. The first thing you learn no doubt is the look of the ground. Heather is safe, peat is safe, and you can go anywhere where you can tread upon clumps of rushes; but distrust anything, moss or grass, that is bright green. You will find, after getting a general notion of what kind of ground you can trust, that you will get also a new sense in your feet, which will tell you extraordinarily quickly whether or not you can throw your weight where you are beginning to tread. This, of course, is when you are walking new ground for the first time. If you have a bog that you have time to learn, you will find out paths by which you can go confidently anywhere.

With or without a dog? it is an old question,

never to be answered, I think, with a single "yes" or "no." Will a dog find you more birds than you can find yourself ? Will a dog help or hinder you, when you take the day as a whole ? Can you take a dog for a whole day, for snipe, as you can take setters and pointers in leash for grouse ? These are questions to be answered in more than one way.

To have a dog as your companion and help on a fine day is the pleasantest thing in snipe-shooting, and for certain kinds of ground you need a dog, or you will waste energy and time. Large areas of dry ground that only hold a few snipe are obviously worked best with a dog, for he will find the two or three that are there in a few minutes, and you, walking, may take an hour and tire yourself unnecessarily into the bargain. On the other hand, if you have a number of small places, which very likely you will get to know pretty well, you will get up to the seats of the birds better without a dog, which may go splashing noisily through wet spots where you could go quietly alone. Then again, on a wet day a dog gets cold and unhappy and cannot work well, and there is nothing worse than to know that your companion is miserable and would like to be at home. And snipe-shooting days are long.

As to breeds, a setter is better than a pointer in that he is faster, gets more easily over heather with his thicker coat, and is not so quickly wet and cold ; and for myself, I should always prefer a setter as a companion, because of his eyes and

his beautiful manners—or hers, for that matter. A pointer is a dog of a different character; he means well and can do well, but he does not understand all that a setter understands. One of the best dogs I ever saw set to snipe, by the way, was a mongrel. I do not know what his complete ancestry may have been, but I believe his mother was an Irish water-spaniel. He looked as if he had pointer blood in him, and a touch of poodle, but he found, I believe, every snipe on the Irish bog over which he was sent, and he would retrieve, too, as well as point.

It is not every dog that will retrieve a snipe. There is something bitter or disagreeable in the scent of a snipe—and a woodcock, too, for that matter—to which some dogs object, and unless a dog has been trained when young to find and carry snipe, it is often useless to send him to fetch it. Spaniels seem to retrieve snipe better than retrievers—or they less often object, perhaps, to the scent.

You may sometimes get a snipe in a grouse-drive. I do not know that I should ever take one in preference to a grouse, if both were coming over the butts; but I think there are few more fascinating shots than a snipe, high and fast and small, in an interval between oncoming grouse. It is often not a difficult shot, for a snipe, after its zigzagging beginnings, flies straightforward enough; but the variety it adds to the drive is delightful. A driven snipe by chance might follow a driven blackcock; what more could the grouse moor do for you?

It is possible, too, to drive snipe in preference to walking them, particularly in places where they can be put over a high hedge, or a belt of willows such as you may find on the fringes of snipe-ground in Wales. But you will get most of your snipe walking, and in all weathers, open and frosty, rough and mild. Snipe are incalculable birds. There are days when you will hope for a bag and will find fewer than ever ; days when you will put them up in what may seem the unlikeliest corners, dry and dusty ; days when they are wild and days when they have to be kicked up. You will pray most for the day when they are " in " ; when the marsh has filled with the birds from Norway and the North, and you have visions of an entry in the game book of fifty couple. But these are days to dream of, not to expect.

Snipe, like woodcock, have pin-feathers. I have drawn one pulled out of its position, so that by picking up the bird you can find it at once. I do not know whether snipe's pin-feathers have ever been used by miniature painters as woodcocks' pin-feathers have been used ; but they would make an even more delicate point for fine work.

With the common snipe in the bog you will find jack snipe, but not in such numbers. The jack snipe is so-called, of course, from his size. A " jack " is the lesser fellow of his kind ; so you get a pike under three pounds or so called a jack, and the whimbrel in the north of England is known as a half-curlew, curlew jack and curlew

knave. But the " jack " differs from the common snipe not only in his size. He is a winter visitor ; he comes to us from October to March or April, and never remains to breed. And although he is a migrant, and therefore capable of long and probably fast flight, when you meet him on the bog he behaves like a butterfly. He flits up, flickers about, and flits down again, dropping so suddenly and straight that you would swear you had shot him—whereas he is quite a tricky bird and often missed. If you walk to where he has dropped, you will very likely have to kick him up, for he will not move unless he must. He is one of the few wild creatures—golden-crested wrens and hedgehogs are two of them—which seem to be fearless of man. You can stand with your foot a few inches away from a jack snipe and he will not fly ; I remember one hot morning when I was fishing a little river in Connemara, stooping over a jack and admiring the green sheen of his back in the sunlight ; it was only when I put my hand down to touch him that he flew. Without a dog, you may possibly walk over every jack snipe near you.

A Common Snipe weighs on the average four ounces, though you may shoot some that weigh five, and snipe have been killed weighing as much as eight ounces. A Great Snipe weighs eight ounces or more, but you will be lucky to see one in a life-time, for the Great Snipe which visit this country are only stragglers on migration from Scandinavia or Siberia to Africa. A Jack Snipe weighs no more than two ounces and a half.



Woodcock's wing, showing position of pin-feather.



CHAPTER IX.

WOODCOCK

JUST as with snipe, so with woodcock; if we treated them better we should have more of them; or I ought even to write, if we treated them fairly, for we do not. We shoot them in the breeding season. There is no close time for woodcock set by the game laws, and so their period of protection is settled for them by the County Councils, in the schedules which they issue under the Wild Birds Protection Acts.

Normally, therefore, the woodcock is protected from March 1st to August 1st, as are many other birds; and consequently it is still possible in some places to shoot woodcock all through February, when the pheasants and partridges, not to speak of the grouse, are left in peace. But the more enlightened County Councils make special provision for them, extending the time of protection from the end of January, or to the end of August, or possibly both; and the example of these County Councils will, I hope, be followed, until the full protection of the bird in the breeding season becomes general.

For there is no doubt, I think, that the period of protection might fairly begin in the middle of

January, or even on New Year's Day. Woodcock pair early—earlier than partridges, and partridges, in a mild January, you may often see paired before the middle of the month. And is there anything more unfair, or more contrary to the written or unwritten laws of sport, than to harry a bird at the time when it has chosen its mate and is looking round, it may be, for a place to nest in? More, for besides the unfairness of disturbing the pairs, there is the folly of the thing. For woodcock, like snipe, are partly migratory and partly resident; or, rather, the main lot of woodcock which we see in the winter are migrants, which come to us from Northern Europe in autumn and return in spring, while we have also a certain number of residents, which nest with us in spring and remain in the country through the year. And these residents, I think there is no doubt, are increasing in number, and would increase still further if they were allowed. There are woods in which more and more woodcock nest each succeeding year, and when you find that they are on estates where woodcock are not shot in January, the conclusion is obvious.

A woodcock's nest is a very simple affair, a hollow in the ground with a few dead leaves and bracken. Four eggs are laid, round rather than oval, buff splotched with ash and chestnut. Like the snipe's, they are often singularly handsome.

Woodcock feed mainly on worms, which they probe for in mud, but they eat grubs and small

snails and other insects. Should there happen to be cattle in the neighbourhood of a covert to which woodcock come, you can tell their presence by the borings in the droppings outside. A woodcock's bill is constructed specially for this purpose of boring; if you examine it, you will see that it is composed partly of a tissue of nervous substance which is supposed to enable it to detect the movements of worms and insects when it plunges it into the soil. The head is structurally peculiar in another way, for the eyes are set strangely far back, so that the bird when flying cannot see where it is going unless it points its bill downwards, which gives it a queer expression of demure surprise, rather like an old lady looking up over her spectacles. The eyes are very large, round and black, plainly fitted for night work rather than flying by day, and if you happen to catch sight of a woodcock on the ground—not easily seen, for the mottled plumage fits its surroundings exactly—it will probably be the brilliant black eye that gives the bird away.

The plumage varies. Generally speaking, it is a rich chestnut brown, barred with black and grey; but there are lighter varieties. Once, when waiting outside a covert for duck on their way from one pond in the woods to another, I saw a bright buff woodcock fly almost straight towards the next gun. He was taking a duck, and did not see it; I could not shoot, and we never saw it again. There is no difference in the plumage of the sexes, and though the hen is

generally bigger and heavier than the cock, the only outwardly distinguishing feature is the size of the pelvic bones, which you can feel to be farther apart and slightly more prominent in the hen.

But as regards plumage, of course, the characteristic possession of the woodcock is the so-called pin-feather or pen-feather in the wing. This is a sharply pointed, stiffly pliant feather, creamy-white, barred with dark brown, which you will find near the angle of the wing at the base of the first primary feather. In the drawing of the wing I have pulled the feather out of its place—it should be looked for from the under-side, by the way—so that on picking up the bird you can find the "pin" at once. Years ago, before the finest water-colour brushes were made of sable, painters of miniatures used these feathers for their delicate stippling, so that they had an actual market value and were prized accordingly. To-day, because of that ancient use, they have become a mere trophy ; interesting enough and pretty too, and very properly to be offered as a decoration for a companion's cloth hat, should she be otherwise suitable ; but if you will notice that the men who put these feathers into their own hats generally seem to wear bowlers when they are shooting, you will probably decide to go yourself unadorned.

Woodcock are birds of interesting habits. In early spring you may see the cock flying low over the birches or firs where his mate has her nest, backwards and forwards, with a curious croaking

note like a frog's. "Roding," this spring habit of flying is called, with no satisfactory derivation for the word that I know of; but it is not allied in its origin, I think, to the "roads" or "shoots" which the bird uses in going from its daylight haunt to its feeding-ground. In the days when nets were largely used for catching game, fowlers used to take advantage of this habitual use of the same openings or passages through the woods, and put up nets to intercept the birds; so that dusk, when the woodcock began to move, came to be called "cockshoot" or "cockshut time"—a fact which occasionally deceives the sporting journalist, who gaily applies the term "cockshoot time" to the season of woodcock shooting.

A sight I remember and should like to see again—though you need luck in time and place to see it—is a woodcock courtship. It was in the dusk of a January evening, and two birds suddenly came dancing by. In the half light for a moment I did not recognise them; then I saw the long, downward pointing bill, and realised that there were two woodcock, counterpoised and twisting as you may see golden plover over Scottish hills in April. It was half flitting, half a dance, and they were gone. But I have been thousands of times at dusk in that place without seeing such a sight before, and I may be there thousands of times again without seeing it. Dusk, the moment of courtship, and a pair close enough to you to be seen—it is a combination that could not be common.

Another sight of the breeding season I have

never seen. That is a woodcock carrying her young. For many years it was disputed whether a woodcock could do this, but the fact has been definitely established, if not by a multitude of witnesses, at all events by those whose word can be accepted. The mother has been seen to pick up her young, one after another, and to tuck each little bird, as she picks it up, between her thighs, in which position she carries it where she pleases, with its long legs hanging in the air. She has been seen to move all her four babies in this way, possibly to take them to a distant feeding ground, one after another.

A legend of surgery has attached itself to the woodcock. It is supposed by some people to understand the principles of first aid. From time to time woodcocks find their way into print which have been picked up with wounded legs properly plastered and bandaged, the plaster being dried mud and the bandages grass. The leg has been hurt, possibly broken, by a pellet of shot, and the intelligent bird is supposed to dress the wound and bind it up, adroitly adjusting the apparatus with its bill. I have been shown more than one leg thus plastered and bound, and have realised that only a little imagination is needed to transform the accident of a piece of grass catching in the mud that would crust on a splinter, into a bandage deliberately arranged to support a broken limb.

Woodcock are difficult birds in many ways—shy, elusive, here to-day and gone to-morrow. But are they hard to hit? From the hubbub

which arises when a woodcock gets up in an English wood when you are covert-shooting, you would suppose that they were not only rare, valuable and possibly dangerous, but also that it would be a triumph to hit one. Up to a point you would be right. You may hope for a cock or two in a likely covert in late autumn or winter, but you cannot be certain that cock will be there ; everybody likes getting a woodcock, some men become unsafe shots when they see one, and many woodcocks are missed. But if you were to conclude that a woodcock always gives a difficult shot you would be wrong. You can see how easy a woodcock can be if you happen to come on one beaten out of bracken on a grouse moor, and contrast its light flitting with the vigour and spring of the flushed grouse.

In the open, although a woodcock has a swerving, sliding flight of considerable pace, it is a fairly simple mark. It is among or near trees that it is difficult. The bird lies close, as if it hoped you would pass it, or as if it were asleep, which it very likely may be ; it gets up with a loud clap of the wings, and then looks as if it did not know where it was going ; it seems just to avoid flying into tree trunks, and to change its mind every few yards. It has a disconcerting way, too, of flying low and sometimes straight at you ; and when you are standing, as you may in an Irish wood, in a clearing with not much room to shoot in, I am sure just as many cocks are missed by being fired at too close as are missed by impossibly long shots in the open.

And where is the best woodcock shooting? Who can say? It was an easy question to answer once—Ireland was the country. There are excellent days to be had with woodcock in England, and there are great woodcock coverts; there is Swanton Wood, near Melton Constable, with its record of 105 cock on a day in 1872, and there are the wonderful coverts of Lanarth in Cornwall, where on December 21st, 1920, Mr. P. D. Williams's party of seven guns beat the Holkham record with 106 woodcock, six pheasants, nine snipe, three woodpigeons and a rabbit, and where there has been first-rate cock-shooting before and since. But, generally speaking, woodcock-shooting in England is a chancy business, depending first on the numbers of birds which come over in the autumn migration, and then on the numbers which may happen to be in a particular wood in a particular night, for twenty-four hours later they may all have gone. Not all woods will naturally hold cock, as the Lanarth coverts seem to hold them, and as the great coverts used to hold them in Ireland.

But in Scotland and in Ireland things have always been different, particularly in one respect. There are certain things which go to make a good woodcock covert; food and shelter, of course, but above all quiet. Woodcock cannot bear being disturbed, and in England we spoil many woods which would make good woodcock coverts by putting pheasants into them. In Scotland pheasants have never been bred in the style and on the scale of the English rearing-fields, and

wild birds are all that are seen over thousands of acres of planted hillside. And there, among birch and spruce and larch, in silent hollows and sheltering gullies watered by the burn, the woodcock light when they have crossed the North Sea; and if they pass on, others follow, so that the wood remains always with cock in it. And I think that of all the shooting to be had in these islands, there is nothing more delightful in its setting and its change, than days in mid-winter among these hillside woods. The spruces sparkle with snow, roe deer and rabbits gallop through the undergrowth, huge capercaillie rattle from the pines, woodcock flit from birch to bracken. The day ends at three o'clock, for the northern night is long; but woodcock days in sunlight on Highland snow are some of the best days of all.

And Ireland—what am I to write about Ireland? Nowhere have I had happier days or better sport with woodcock than in Ireland. Those woods along the shores of Lough Mask, with the alders growing down to the stones on the water's edge; woods with little streams running through them, and pools arched by osmunda fern, and holly standing up red-berried and shining above gold-brown bracken, and clumps of gorse through which blue-eyed, tattered Irishmen tore their way with sticks above their heads, breathless and shouting—I shall not come to those woods again. I do not know, indeed, whether the trees are still standing, or whether the cock are still there; but with the quiet and the shelter they gave under the blue skies of

Connemara and Joyce's country in the old days they were the very Paradise of these islands for woodcock, and all the great records of woodcock-shooting belong to them.

And of records of woodcock there is one that is often talked of, and sometimes thought to be a more remarkable fact than it actually is, and that is the happy accident of Sir Francis Chantrey, the sculptor, in killing two woodcock with one barrel. The birds and the shot were immortalised, for Chantrey carved a model of them, and endless epigrams were composed on the feat, of which perhaps the best known is :

> "Luckless our fate—a doubly luckless lot!
> A sportsman carved us whom an artist shot."

But since those days the feat of shooting two woodcock with one barrel, though not the carving in marble afterwards, has frequently been equalled.

Besides the uncertainty of the woodcock being "in" or not when a wood is shot, woodcock-shooting is the most chancy business in the matter of seeing and being able to fire at the birds. Woodcock cannot be beaten out of a covert like pheasants. Some of them will go forward, others back, others out at the sides. So that the usual method, if the wood has a ride cut through the middle, is for a gun to walk with the beaters up this ride, while two other guns walk on the flanks, and the remaining guns—two are sufficient—are sent forward. Some people prefer to beat a wood right through in this formation; others beat the wood half way through, and then

take out the beaters and bring them back through the other half in the reverse direction. In either case, many cock are sure to escape being fired at, and as many more, probably, are not seen at all. If one-third of the cock in the wood are shot at, that is probably a larger proportion than usual.

If woodcock shooting is so fascinating a thing, if woodcock are birds of fancies, if it has been proved that they can be scared away from coverts where they used to be plentiful, could we not set out deliberately to make a woodcock covert ? Could we not pick out a wood where cock are known to come, and leave it unshot, perhaps, for a year or two ; never put pheasants into it, never shoot cock in it later than December, and then hope that we might establish it as a recognised resort for nesting and migrant birds ? Are there no " tips " for attracting woodcock, in the way of delicacies, such as the raisins with which gamekeepers sometimes try to keep their pheasants at home, in company with a few of their neighbours' ? Hawker, in his *Instructions for Young Sportsmen*, mentions rotten apples as a bait, accidentally discovered in Dorsetshire, but he gives no evidence of any success of his own in making a cock-covert. Food, shelter and quiet are obvious, but without one accident no one, I suppose, could hope for success. With Kerry and Connemara as the westernmost limit of migration, the covert must lie somewhere on one of the main lines on which the migrant birds move to and from those places. Those lines are indistinct at present, but, knowing as we do that

there are certain districts where woodcock are more plentiful in winter than in others, and certain coverts which are better than others, we could probably get a fair idea of the lines on which there would be the best chance of attracting cock, and we should then have to make up our minds about the pheasants.

A little over twelve ounces is an average weight for woodcock, though they have been known to weigh as much as eighteen ounces. But fourteen ounces is a heavy bird.

CHAPTER X.

BLACKGAME: PTARMIGAN: CAPERCAILLIE

THERE is a date in the sporting calendar which, in Scotland, is universally disregarded. That is the twentieth of August, which is the first in the opening season on which you may legally shoot blackgame.

I do not mean to say that anybody and everybody shoots any blackgame they see on the Twelfth or any other day in August before the twentieth. That is not so. If, on the Twelfth, the line of guns happened to pass through a rushy hollow, say, and one of the dogs came to a point, your host or the keeper might possibly warn you that there were likely to be young blackcock there, and in that case, of course, you would not shoot. But if, as may very well happen, a big dark bird should bustle up from the heather high on the flank of the hill, and should come swinging down the line, or should suddenly appear from nowhere in a way that blackcock have, you will not hesitate. If he should happen to come over you or across you, down let him come. For it is not a question, as it is with the young blackcocks, of leaving him till another day. He has not yet got his full

autumn plumage, it is true ; he lacks the splendid lyre-shaped tail of October. But if you leave him alone you will probably not see him again. He is a sojourner and a traveller, and to-morrow he may be over the hills and far away. And so for him, and him alone, the old blackcock, there stands the convention that you may bring him into the bag, for soup or whatever use the cook can make of him, when you please.

It is different with the young birds. For them, I think, the day might be moved to a later date. For on the twentieth, indeed, they are but callow fowl, feeble of flight and reluctantly leaving the grass and rushes when they must, rather than rattling out of them with a will. And to me it seems a shame to shoot them, before they have grown to the size and dignity of full blackcock-hood, with their crimson wattles and their strong curved tails and the blue gloss on their necks and backs. They should be left for the later days of driving, surely, when they will make a grand mark, each of them, flying faster than the grouse, and when some of them, at all events, will have a chance of surviving, and wooing and fighting for a mate in the spring. If you shoot them on the twentieth, you are only shooting chicks, and they are wretched things to pick up ; their weak wings remind me of White Admiral butterflies, and their thin necks droop like string.

Convention of a different kind protects the greyhen. It is an understood thing on most grouse moors that you do not shoot greyhens.

The reason is much the same as that which ordains "cocks only" for the latter part of the pheasant-shooting; a blackcock, like a cock pheasant, will mate with several wives, and so by killing the cocks you will not reduce the stock, for there will be sure to be enough left, whereas if you kill a hen you are preventing the addition of so many cocks and hens to the stock next season. But I think the rule can be carried too far. Greyhens, like other female creatures, after a certain age become barren and also quarrelsome, and probably an ill-tempered old greyhen, who does not bring up a family of her own and drives away young hens who want to nest, does definite harm to the moor and would be far better out of the way.

I believe opinion is changing on this subject, and on some moors already the convention is dead; you may shoot greyhen, and may rid the moor of those ancient fowls who get up at your feet and fly with long necks outstretched, making noises like complaining ducks, to the ledge of a rock or the branch of some distant pine, where they securely survey the empty moor. I am sure they are better in the soup. But there is need of care on this question of greyhens. It is best, unless you have been told the contrary, to assume that greyhens are to be spared; and the next thing is to be sure of sparing them. A bigger bird than a grouse, lighter in colour, and with a slower wing-beat—that is the difference to look out for; but it is a difference you may discover too late. A greyhen coming round the

hill between you and the sun is a fatal bird. Do not be over-distressed if you bring her hurtling to the heather; it is a dreadful matter to pick up that large fair-feathered body and to bear it with your own hands to the keeper; but it is not impossible that your host later in the day may restore your peace of mind by doing the same thing, without shame.

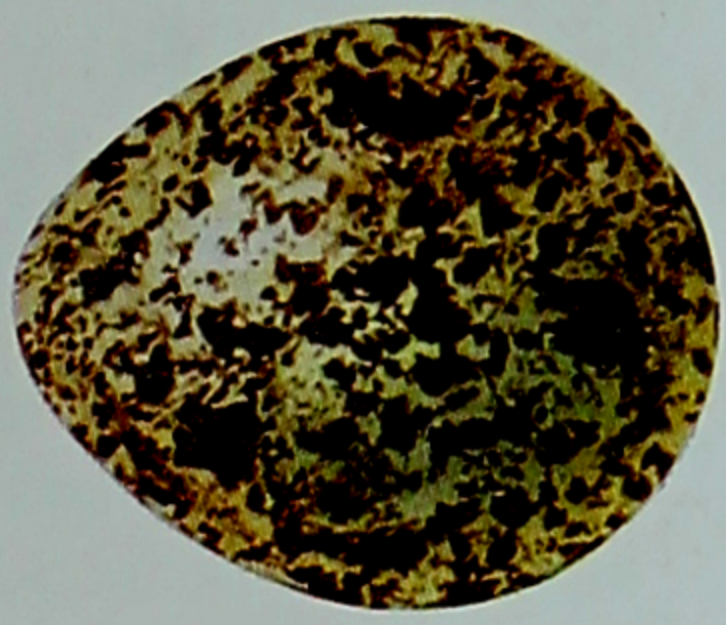
You may see gatherings of blackcocks on spring mornings, when they seem to come together for the express purpose of fighting, and when the stronger and older birds strut and challenge, and drive off younger rivals much as stags battle for their hinds in October. Blackcocks fighting, like cock pheasants, or a cock grouse showing his splendours when wooing his hen, are almost oblivious of other things; you can come right up to them, as poachers know very well. Otherwise they are the most cautious and wary of birds. You will see them sitting on rocks in the distance, with their long necks craned against the sky; but before you have taken a few steps the rocks will be empty and the great birds will be sailing out over a mile of glen.

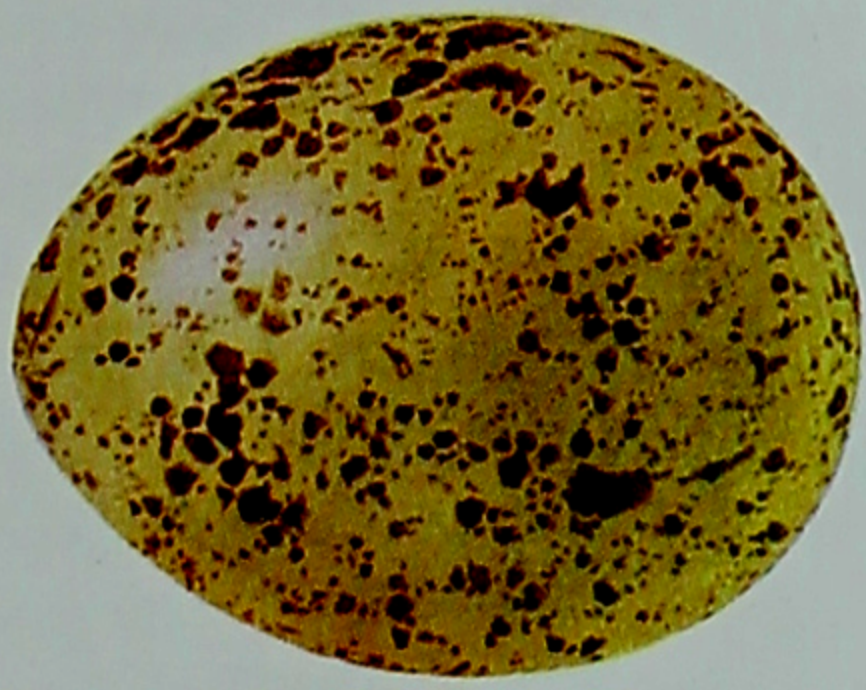
The blackcock is the only one of our game birds whose name is not shared by his hen. She is a greyhen always, though no doubt both of them might properly be said to be "black" grouse, *Tetrao tetrix*; they come second of the four members of the family of *Tetraonidæ*, native to these islands. So we should speak strictly (not that these things matter very much)











EGGS OF GAME BIRDS : I.

French partridge

English partridge

Pheasant

Grouse

Greyhen

of a greyhen's egg, not a blackcock's, as you may see it sometimes printed ; she scrapes together a few bents for a nest and she may lay as many as ten eggs, though six or seven is a commoner number, buff, spotted and speckled with chestnut brown.

A very beautiful bird is the ptarmigan, *Lagopus mutus*. But it is much less commonly seen than its cousins the red and black grouse, for it is a bird of the mountain heights, and perhaps is more familiar to stalkers on the lonely tops of the corries than to grouse-shooting parties keeping to the lower ground. Perhaps because of its loneliness, it is strangely tame ; you may see the bird a few yards ahead of you, unmoving and apparently careless of your approach, till it suddenly glides off the rock into space. But, indeed, it is not always that you can see the bird even when it is close to you, for it changes its plumage with the season and to fit its surroundings. In the summer it is an exquisitely mottled ash-grey, exactly matching the granites and lichens among which it crouches ; and this mottled plumage it gradually exchanges for pure white, and then, except for its scarlet supra-orbital comb, it is invisible against the snow.

Ptarmigan occasionally find their way into the bag in a day's grouse-shooting, if there is high ground close above the heather, as often happens with a deer forest. But the best ptarmigan shooting is got by driving, and there are fortunate places which may be described, as you speak of

grouse moors, as ptarmigan hills, and where the ptarmigan shooting is the distinction of the whole ground. And it is owners of property of this kind who have the best reason for thinking seriously of the liberty and protection given to the golden eagle throughout Scotland. An eagle can spoil a grouse drive, as many organisers of driving parties know, who have watched that noble form swing up over the march and then have seen the drivers and flankers powerless to control the scared coveys. But if the eagle has spoiled the drive, the grouse will come back ; the ptarmigan will not, if a pair of eagles take the numbers they want. This is just one of the cases where the line of protection cannot be hard and fast, for an eagle may even be welcome on a deer-forest, where grouse add to the deer-stalker's difficulties, but the owner of high ground who does not happen to think first and foremost of deer may prefer to protect his ptarmigan.

Lagopus mutus, by the way, is not an exact description. The ptarmigan is by no means mute ; indeed, his croak is most insistent, and ugly into the bargain. It has something of the guttural quality of what might be an immense frog ; but, possibly because of beauty and harshness combined, it reminds me, too, of the churring noise nightingales make when their singing is over and they are feeding their young.

But first, though perhaps scarcest, of the *Tetraonidæ*, in size and importance, is the Capercaillie, the Cock of the Wood, *Tetrao*

Urogallus. Cabhar Coille is the Gaelic from which his name—often shortened into "caper" in ordinary talk—is derived, and that he is indeed Cock of the Wood is plain from his port and his beard. He is as big as a turkey, with long black feathers instead of a turkey's wattles; his neck is purple and his breast shining green and black mottled with white; he has a crimson comb over his eye, and great legs and claws that would frighten the gamest of other game birds. And he is cock of the wood by what he does as well, for no other bird will dispute with him; if he should happen to come down where the keeper feeds pheasants, it will be little the pheasants get. Gamekeepers for that reason do not like him, and foresters detest him, for though in summer you may find him out on the moor getting berries and seeds, his staple diet is the young shoots, particularly the leaders, of fir trees. So that, like the beautiful roe-deer that live in the same woods with him, his numbers cannot be allowed to be unlimited.

The capercaillie became extinct in Scotland at the end of the eighteenth century, but it was reintroduced in 1837–8, mainly by the efforts of Sir Thomas Fowell Buxton and Lord Breadalbane, working with Mr. Lloyd, a naturalist, who sent the birds over from Sweden, and it soon re-established itself. It has now spread from Perthshire north, east, and west, so that in the central Highlands wherever you find pinewoods you will find capercaillie; and the hen capercaillie nests, I suppose, each year further from the spot

where the birds were first liberated. Owners of fir-plantations may not be delighted at this, but the caper is without any difference of opinion a great sporting bird. He is not quick off the ground, and when he gets up from among the blaeberries on the open moor you could hardly miss the lumbering thing; but let him come crashing out from the top branches of a spruce and sail out over the wood to the glen, and you will get some notion of the pace of the great bird flying. He shows such a spread and his wing beat is so slow that his real speed deceives you; but the old maxim of sporting birds, that "the bigger the bird the faster he flies" holds true, and I remember one particular occasion when high pheasants and capercaillie were beaten out together from trees on the flank of a hill, and the pheasants were killed and the capers missed. It looked impossible to miss them.

The close season for capercaillie is determined not by the Game Laws, but by County Council Orders under the Wild Birds Protection Acts. The reason for this is probably simple enough, for when the Game Act of 1831 was passed, which is the main substance of our present Game Laws, there were no capercaillie in the country to make laws about. It is perhaps rather curious that though it is a grouse, and has every characteristic of a game bird, its name has never been added in law to the others, while we solemnly print among our game birds' names, year after year, that of the great bustard, which has long been extinct. But the capercaillie,

perhaps, is too voracious a destroyer of sapling trees to deserve special protection, and the County Council Orders answer well enough for all practical purposes.

In Austria, Germany, and Poland—or this was so before the war: I have read of little sport there since—the capercaillie, far from being protected in the breeding season, is at that time persecuted more than at any other. It is a cruel business, and the unhappy bird's habits are its own undoing. When his love is upon him in the spring he calls upon his mistress with such fervour, seated on a branch and quivering with emotion, actually even closing his eyes in the extremity of his passion—I must own I have never seen this myself, but you may read of it—that he becomes quite unconscious of his surroundings, and the ardent Continental sportsman, approaching to close quarters with a shotgun or rifle, deftly knocks him off his bough. This spring love-song is known as the "lek" or "spel," and is always uttered from a chosen spot, possibly the bare cap of a rock, but more usually the branch of a pine.

Like the greyhen, who has so noble a spouse, the hen capercaillie is an undistinguished bird of browns and greys. She makes a nest in the woods or on the fringe of them, under some such shelter as the branches of a fallen tree, and lays from six to twelve eggs, like the greyhen's but larger and handsomer, of a creamy buff, speckled and spotted more or less evenly with a rufous brown.

CHAPTER XI.

PIGEON

PIGEON are not game birds, but since they often get a day to themselves, they deserve a chapter to themselves. There are three species native to this island: the rock pigeon, *Columba livia*, often known simply as the Blue Rock; the stock dove, *Columba oenas;* and the ringdove or woodpigeon, *Columba palumbus*.

Of these, the first, as its name tells you, breeds in caves on the sea-coast, and one of the most difficult forms of shooting possible is to shoot these birds from a boat. The gun waits in a boat outside the cave, a man in another boat frightens the birds out of the cave, the birds dash out, and the gun does his best to hit them. I have never happened to shoot rock pigeons in this way, though I have watched them darting from the caves, and I should always dislike shooting from a boat on the sea for one reason, for I think no one ever gathers all the birds he hits, owing to the tide. But about its difficulty there can be no question. If you have ever tried to shoot duck or teal out of a boat you will know that the boat adds greatly to your conundrums, for as you swing the boat sways, and you cannot properly

control your gun. If you add to the movement of the boat the movement of the sea-water, the chances of the pigeons become obviously multiplied. The rock pigeon, in any case, is a fast flier, and darting out of a cave he looks quicker than a snipe.

The Blue Rock deserves his name, for he is indeed a lovely grey-blue bird, with the flash of his white rump and the black bars on his wings. And it is his very pace and dash which have brought him to his unhappy position; for he is the bird which has been chosen as the target in pigeon-shooting competitions—a form of amusement which is now made illegal in England, but still survives on the Continent, at Monte Carlo and elsewhere. It needs a hardy man to defend this business of pigeon-shooting. Even forty years ago, when the Badminton volumes on shooting were being put together, one of the chief pigeon-shots of the day was much exercised to make out a case for it, and even he did not try to dignify it with the name of sport. But to-day public opinion has decided wholly against it; perhaps because the public knew too much about it. For it was often a dirty game, with money to be made out of it, and crooks to make the money. Bookmakers betted on the shooting, and at country meetings—I am not writing of places like Hurlingham—used to bribe well-known shots to miss particular birds previously agreed upon.

For that one reason it would be difficult to praise pigeon matches, but what really finished

them was the knowledge that the bird did not get a proper chance. It is not simply that the thing was thought to be cruel. It is no more cruel to shoot a pigeon than a partridge. But to take a live bird and put it in a box on a lawn, twenty-five yards away from a man with a gun, and then to flap down the sides of the box with the knowledge that it is about five to one that the pigeon will be smashed the next moment—that is so far from sport as to be disgusting. The game is played at Monte Carlo chiefly by Continental professionals, but occasionally by an Englishman.

Of the two other pigeons, the stock dove and the ringdove, some of those with us in winter are our resident native birds and some are migrants. Of the resident birds the ringdove or woodpigeon is the more plentiful, and it is his voice that fills our woods and gardens with the familiar croon, *Tak' two coos, tak' two,* which is so happy a sound of the English afternoon. Woodpigeons are early and irregular nesters; there is hardly a month in the year in which young pigeons have not been found in the nest, and it needs only a little warm sunshine in December or January to send the amorous cock trying over his flight of courtship—that beautiful movement of three wing-beats upwards and then a floating descent on level quills, over and over again above the roof of the woods. When I see that flight, or hear a woodpigeon coo, all desire of a gun leaves me.

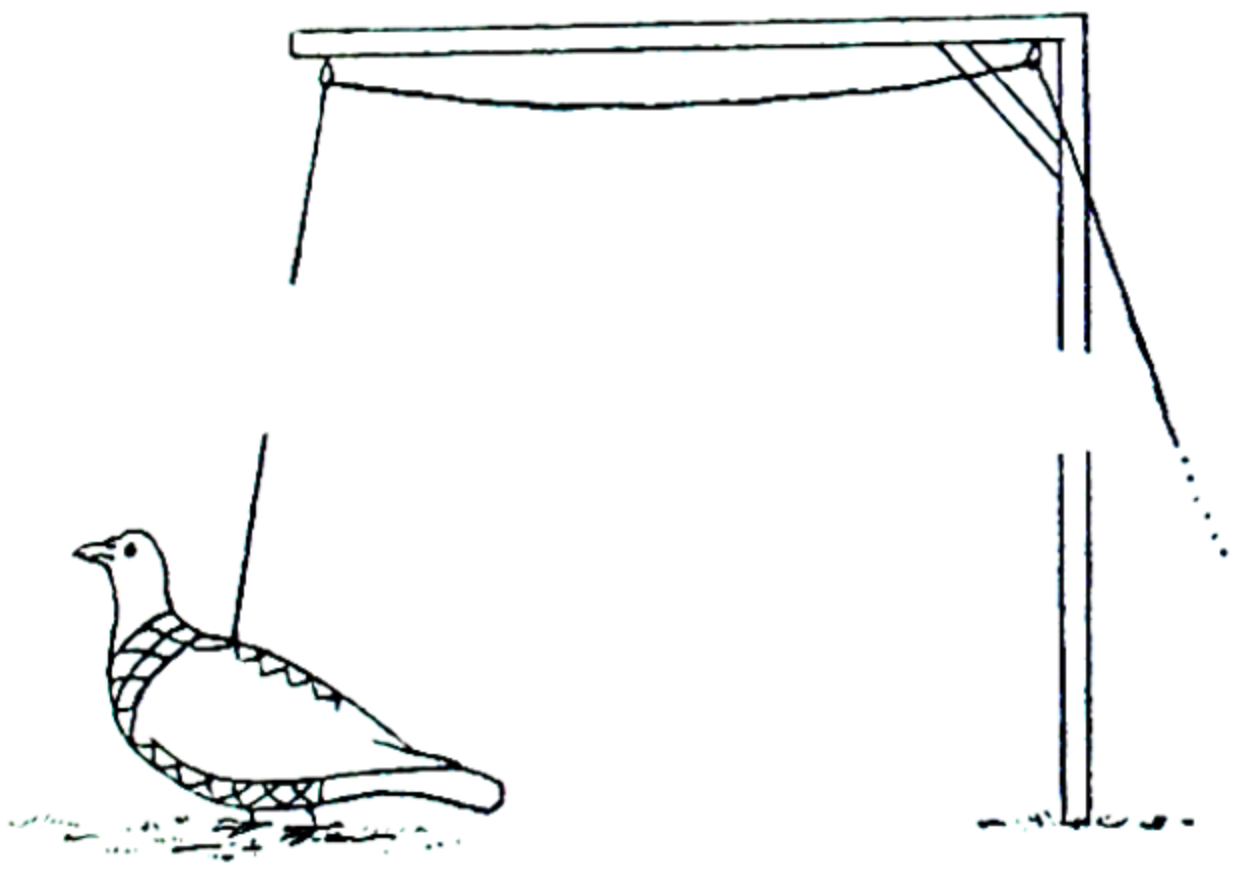
But woodpigeons are sporting birds. They are as wary as jays, and as hard as any bird in the

wood to stalk; if you get near a tree in which there is a pigeon, he always puts the tree between you and himself when he flies out. They are also voracious birds, and prefer wheat to other crops at harvest time; a farmer can begin to count his losses when he sees a field of corn standing in stooks and blue with wood-pigeons. But that is one of the best times to make a bag. If you know that pigeons are coming to a particular crop and can make a hide in the hedge or in the field itself, you may be able to get an afternoon's shooting in July or August which will account for a good many cartridges.

If the field happens to be next a wood the making of a hide in the hedge is easy enough; you have only to bend a few boughs into position to make a screen. If the field is open, you may be able to make a hide with stooks on the edge of a ditch, and one of the best of shelters is a hole dug in the ground with stooks packed round it; but getting a hide dug in a field in dry weather is not an easy job. Next, you will want a decoy. You can buy a painted wooden decoy for seven or eight shillings; you can carve and paint your own; you can use a stuffed bird; or when you have killed a woodpigeon you can set him on a stook with a forked stick to prop up his head. It is best to have more than one decoy, so that if the pigeons come singly at first and you have the opportunity, you can set up two or three. You will not want to show yourself more than is possible, however, and you can leave the other

dead birds to lie where they have fallen. Remember to set up your decoys head to wind.

This precaution of setting the decoy to wind, as a pigeon itself would sit, is of equal importance when you are waiting for pigeons coming in to roost, or when the crop in a field has been gathered and the birds come for the fallen grain, or when it is a low crop such as trifolium. For a decoy used in a flat field in which there are no stooks there is a method of using a live pigeon which is useful. The illustration explains. Get



an ordinary farm pigeon, as like in colour to a woodpigeon as you can; make him a waistcoat of string netting, leaving his wings free; tie a piece of string to the back of the waistcoat, run the string through the rings fastened in the pole and its wooden arm, and take the string—you will want a good long smooth piece—into your hide. Put the pigeon on the ground and some food near him, so that he can walk about and be happy, and if he does not occasionally flutter,

all you have to do is to pull the string and raise him a foot or two. Other pigeons will catch sight of him a long way off.

You may get a good afternoon with pigeons in summer, but the great days, of course, belong to the winter months in those years when there are big migrations from the Continent. We do not get these every winter; in 1922–3, for instance, when the weather was mild and open, the migrant birds of every kind—pigeons, snipe and woodcock in particular—were few in number. When they come over in large numbers they arrive sometimes in separate flocks, stock doves and woodpigeons. And on the size of the flocks depends the possibility of disease. The birds in these huge migratory flocks seem to be subject to a peculiar epidemic, which gamekeepers used to call "acorn disease" or "beechnut disease," believing it to be due to over-eating those fruits. But the disease is actually a form of diphtheritic roup, and is probably caused by, or is an accompaniment of, lack of food followed by overcrowding. The pigeons come to us because hard weather has shut down their food supply at home; they arrive weak and in poor condition, and roost in thousands close together; what wonder infection spreads? The sick birds sit about moping and only just able to fly; many of them fall dead from their perches in the night, and the ground below the trees, white with their feathers, looks as if it were covered with snow.

If you shoot a bird in a year of disease, be sure to look at its mouth. If you see any signs of a

yellowish froth on its beak or in its throat, do not take it home. Diseased birds are best burnt.

These vast migrations, of course, do an immense amount of harm to farmers' crops. A woodpigeon is naturally a bird with a tremendous appetite. Harting, in his *Handbook of British Birds*, gives the following contents of crops which he noted in woodpigeons shot in different months, chiefly between September 1st and February 1st: (1) 26 acorns and nearly 100 ivy-berries; (2) 33 acorns and 44 beechmast; (3) 65 beans; (4) 76 beans; (5) 87 beans; (6) 75 acorns; (7) 139 beechnuts, a few grains of wheat, and a small white slug. But these have been surpassed by birds whose crops were examined by the late W. B. Tegetmeier, who found in one crop 198 beans and a dozen small snails, and in another 190 small snails, 25 grains of barley and 12 of wheat; while Mr. F. W. Frohawk once shot a woodpigeon whose crop held 370 grains and a great number of husks of wheat, 4 seed-pods (full) of the dog-violet, 6 peas and half a pea-pod, 9 pieces of clover-leaves, 1 seed, 1 small stone, 4 snails (*Helix caperata*) and 1 parasitical fly (*Ornithomyia avicularia*). It is not difficult to understand that a flock of a thousand or so of woodpigeons with an appetite of that kind will destroy in a few hours the produce of a whole field.

From time to time organised attempts are made to reduce the numbers of these invading hordes. It was in March, 1911, that the Board of Agriculture first decided to take a hand in the

matter, and issued a notice, rather too late to be effective, suggesting that farmers and any others who might be willing, should set apart particular days in each week, on which everyone who could carry a gun should take up a position in a likely place and shoot every pigeon he could ; the big flocks would thus be kept on the move and might be, possibly would be, decimated. A year or two later county shoots were instituted, and the countryside turned out county by county to deal with the pigeons in the same way. What success those county shoots have met with let those who have organised them say. I have taken part in two, and have not seen a pigeon. The difficulty, I fancy, has always been the same : the woodpigeons do not know the map, and when they move over the county boundary there is nobody to shoot at them.

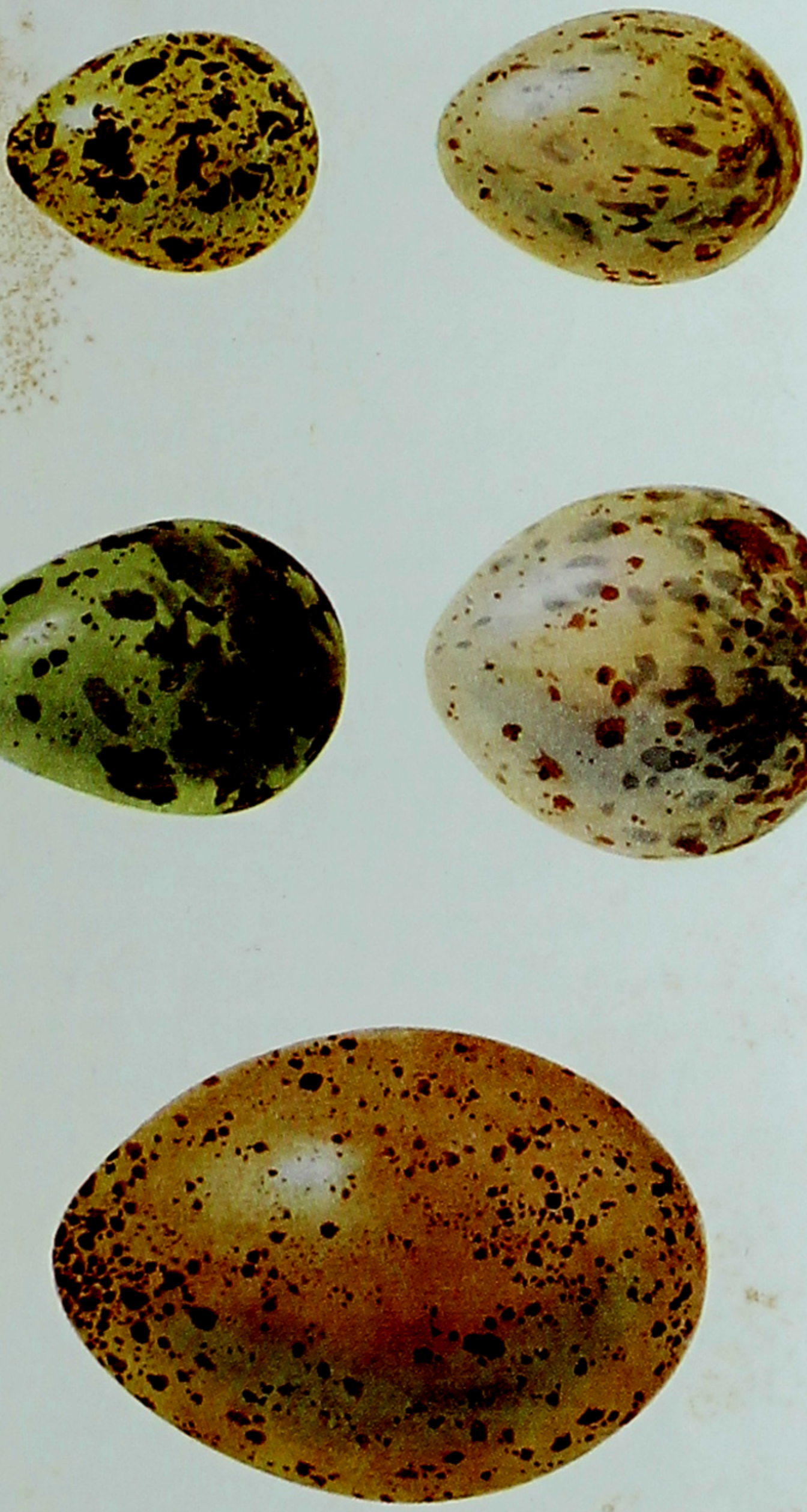
But I have often wondered whether these organised shoots have not had an effect which has not been intended. The big flocks, I believe, escape ; they fly long distances, they have no home, they do not mind where they roost, and eventually they find a sanctuary. But the shooters do make, as a whole, some sort of a bag, and I believe it is chiefly at the expense, not of the migrant visitors, but our resident birds. I believe that in some years the numbers of our own woodpigeons have been largely reduced. And I cannot help wondering whether this may not be the cause to which we should look for the vast increase of the caterpillars which devour the leaves of our oaks in spring.

The woodpigeon is known to eat these caterpillars in large quantities : birds have been shot with their crops crammed with the larvæ of the Dotted Border and Mottled Umber moths and the little green moth that is commoner than either, *Tortrix viridana*. And if you decide, just as woodpigeon food in the fields is getting scarce, to shoot the bird, which would naturally be swallowing caterpillars as fast as its maw could hold them, what are you to expect ?

If you ask old men who have worked in the country all their lives, you will find that this plague of caterpillars is new. They cannot remember trees stripped in this way fifty years ago. A tree here and there, yes ; but not whole acres, not woods stripped. This is a sight of the present century, and it coincides, too, with another innovation—the giving of prizes at local flower shows for the killing of queen wasps. Now queen wasps in spring eat many small caterpillars. They want food for their grubs and the caterpillars supply it. We kill queen wasps and woodpigeons at the same time ; and it is only logical to conclude that the creatures on whom they prey must be increasing in numbers.

If you could be sure of reducing the numbers of the foreign flocks, these large organised shoots might justify themselves. But the fact remains that in years of huge migrations the numbers taken from the flocks are an insignificant proportion, and when you consider the amount of energy expended and labour required, and come to reckon up the cost of the damage which

might have been done by the pigeons that are shot, and the cost in terms of wages of the hours spent in trying to shoot them, I believe you will come to a cheaper and simpler remedy than half a countryside turned out with guns. Before the days of Orders by the Board of Agriculture, our forefathers sent boys out into the fields to scare birds with clappers. I believe that would still be the cheapest way.



EGGS OF GAME BIRDS : II.

Quail

Landrail

Snipe

Woodcock

Capercaillie

CHAPTER XII.

WILD DUCK AND TEAL

MALLARD is the proper name for the drake, the male of the common wild duck (*Anas boscas*); and it is worth while, since the word is often misapplied, to remember the derivation, which is "male" + "-ard" or "-art." This latter is the termination which you find in such words as coward, drunkard, reynard, braggart, and is originally German, akin to the English "hard"; so it implies emphasis in whatever quality belongs to the adjective. Reynard, for instance, is from reginhard, wise in counsel (*regin*), very cunning; and so the mallard has come to be thought of as a very gay and masculine fellow, which indeed he is.

Like other ducks, the mallard moults his plumage in the summer, and his change is singularly complete. In winter he is a beautiful bird, with his shining blue-green head and neck, his pearl grey breast and the brilliant purple-blue speculum on his wing. But in the summer he goes into eclipse. About the end of May his green head becomes spotted with grey, and by the beginning of July he has lost all his colour, and become a dull brown bird like his wife, but

with a darker head. For a short period during this moult, when he loses his quill feathers, he is even unable to fly—a strange provision of Nature, for except upon the water, where he skulks among the reeds, he becomes defenceless.

Ducks open the shooting year, for on August 1st the close time under the Wild Birds' Protection Act comes to an end, and it becomes legal to slaughter the young ducks or "flappers," just able to fly, which may be found about the estuaries and harbours of the sea coast—a somewhat unsporting business. For the real duck shooting comes later in the year. You may add an occasional duck to the entries in the game-book of the grouse moor—and it is, indeed, a delightful chance of the August morning if a mallard clatters up from the burn or loch—but the best duck-shooting is to be had when the birds are flighting. Duck feed by night, and move to their feeding grounds on the ooze or in the fields at dusk, flying back at dawn; and during those two short periods of flighting the shooter waits for them, hidden near where he knows they will pass. It may be behind some breakwater or ridge of shingle or rock on the sea-shore, or on the line between two pieces of water such as the great loughs of the West of Ireland; but wherever it is, there the shooter takes his place, long enough before the line of flighting to make it certain that the duck cannot see him, and there he hopes for twenty minutes or so—he knows it will not last longer—of the best of natural wild sport.

One thing is essential; he must have a good dog. Birds will fall in the water, and must be retrieved; or even if they fall on solid soil, it may be difficult to pick them up, especially in gathering darkness. And your dog, if he knows the game, enjoys the sport as keenly as you do: he is an extraordinarily good judge of where a bird has fallen, and watches the curve of the flying, tumbling body with the eyes of a cricketer in the long field. A wave of the hand and he is off; a few seconds later, and the duck is at your feet.

That is the true duck shooting, but there was another kind, which was fashionable for the first few years of the century—in fact, up to the time of the war. Wild duck were bred much as pheasants are bred, in coops under hens, and were shot much as pheasants are shot; they formed, indeed, a variety of covert-shooting. The procedure, after the ducklings were hatched, was to train them to be fed at certain times, generally at the sound of a horn. Young wild duck in a field, unlike young pheasants, run all together, and at the sound of the horn, which they associated with food, they would run or fly to a spot chosen by the keeper, who in this way accustomed them to be in a particular place at a particular time.

This was the first step; next came training them to fly. Here the methods varied, but the simplest was founded on the knowledge that young wild duck are sure to find water if there is any near, especially if there are old birds on

the water to call them ; so the keeper, if he could, chose for his feeding place a spot on high ground at a distance from the water he knew they would make for, and thus got them accustomed to fly backwards and forwards from their dining-room, so to speak, and their recreation ground. When they were once used to the idea of this line of flight, the rest was fairly simple. He fed them in an enclosure, into which he could shut them when he pleased ; he shut them in every night after feeding them, and on the day of the shoot, instead of letting them out to the lake or the water to which they had become used to fly, kept them in the enclosure until the guns were posted. Then he let them out, a few or many at a time, as he pleased. Away they flew over the guns.

Under some conditions this made first-rate shooting of its kind. The duck, starting from high ground, did not always make straight for the lake below them, but circled round, often at a great height ; so that you got them coming sometimes from unexpected directions, swinging into sight from far away over distant woods and, it may be, swinging away again without coming within shot at all. Duck flying thirty and forty yards up in this way—they are frequently clean out of shot—need good shooting to bring them down as they should be brought down, hit well forward in the head and neck. And if the machinery of the management was not too obvious, the invited guest might find considerable elation in bringing down a right and left of high

duck cleanly and well. But his host, I think, never felt quite the same sense of sudden success.

For he knew how it was done. And the wheels, unfortunately, sometimes creaked badly. I have seen duck that would not fly at all, when liberated to the expectant guns. They waddled down hill; underkeepers rushed after them with shouts of encouragement, while the head-keeper in the wire enclosure cursed. These were unseemly businesses. And now they can take place no more. Wild duck shooting of this kind has become illegal. Under the Captive Birds Shooting Prohibition Act of 1921, it is illegal for anyone "to take part in any event whatever in which captive birds are liberated by hand or by trap, contrivance or any other means for the purpose of being shot at the time of their liberation," so that duck-shooting after what perhaps may be called the early twentieth century style, is now a thing of the past.

But you may still meet duck when covert-shooting. If there is a pond or lake in the woods, duck can be placed on it and can be beaten up in the same way as other birds; better still, if there are two pieces of water or more, so that they will fly from one to the other. This is a much more natural form of shooting than the old style, and needs luck as well as a certain amount of skill in driving. Keepers who want to drive their duck well like to make sure that the duck see no one but themselves when they are once placed on the water where they are to live through the summer. They then

know that they can control their movements up to a certain extent, when they wish to get them off the water, by suddenly appearing at this or that spot, by waving flags and so on. The duck rise at a sight which they do not expect. But if they are perpetually seeing all kinds of people, particularly ladies with bright dresses and hats, they become used to human beings and colour, and will not get up from the water when they are wanted.

Wild duck begin to nest at the end of March ; the nest is made of grasses lined with down, and the duck lays from eight or nine to fifteen eggs of a greenish white. The nest is built as a rule at the water side, among reeds and grasses, but it may be placed at some distance from water—it has been found in cornfields, hedges and woods—and it is sometimes built in a pollard willow or in the fork of some other tree. How do the young birds get to the ground ? Probably the mother pushes them over the edge of the nest.

Ducklings cannot fly until they are eight to ten weeks old, so that if you take an average brood as being hatched in the first week of May, it is pretty plain that they cannot be worth powder and shot by the first week in August. But the name given to them, after all, sufficiently describes the kind of shooting they provide. Who that has seen mallard high in a November wind could find any interest in shooting " flappers ? "

Side by side with wild duck, as possible additions to the bag of a day's snipe-shooting—

or possibly, for that matter, grouse shooting, for a certain number breed with us every year—come teal (*Nettion grecca*). Among duck teal stand out as admirably sporting little birds. When a single teal jumps up from some reedy patch of bog-water, he does not, it is true, offer much of a shot. But try a bunch of teal! A bunch of teal on the wing sweeps past you; take your first bird and then try to find the second! At the sound of your gun the bunch explodes; each bird seems to dart in a different direction, and possibly the bird which you had somewhere in your mind's eye for your second barrel whizzes vertically upwards—the most disconcerting of movements. "A second shot at a bunch of teal" has been described by a well-known game shot, in a kind of symposium once conducted by *Baily's Magazine*, as the most difficult possible.

Teal are not easy birds to breed as are wild duck. They are most capricious, and though they may be placed on a stretch of water apparently ideal for duck, they will not nest there unless they choose. The nest is a lovely thing, round and deep and downy, and the small, creamy-white eggs may be ten or a dozen in number, or even as many as fifteen.

Teal, like wild duck, are engagingly ubiquitous. To see duck on the wing is a common experience almost anywhere, and never do I see them without delight. In winter nearly any pond, however small, may hold duck for a day or two, and in summer I have come across mallard in

a wood far from water, with apparently little reason for their presence. Teal in the same way may suddenly appear haphazard; I have had a pair sweep by my head at dusk in a garden, and once I remember when ferreting rabbits in a hedgerow in January, miles from water of any size, I looked up and saw a teal out of shot, which had come high up directly over me. If I could have seen it in time! But one never does see such things in time; they are the kind of shots of which one dreams.

Two other species of duck you may meet on ponds in winter—the tufted duck (*Fuligula cristata*) and the pochard (*Fuligula ferina*). Both of these are winter visitors, though the numbers which breed in English waters increase yearly. They are also different from mallard and teal in that they are diving ducks, and consequently are very seldom seen on the wing; they are shy and cautious, and like to keep by themselves in open water some distance from the bank. The tufted duck is so named for reasons which are obvious as soon as you see him; he carries a black tuft something like a pigtail at the back of his head. Another name for pochard is poker, or red-headed poker; it has a bright chestnut head, and the colour of the iris varies from pale yellow in the young bird to scarlet crimson in the full-grown male.

And of other duck likely to come the way of the beginner there are few. There is the wigeon, which you may possibly meet in a Scottish glen, but he is not a common bird inland; his place

is the salting and the seashore in winter. You will get chances at him, sooner or later, along the shore in hard weather. And as to shore-shooting, which is sometimes written of as though it were rather a despised business, I would advise any boy who has the opportunity of shooting along the coast in winter to be thankful for his luck, and to realise that the harder the weather the better will be his shooting. He will have days when he comes back empty-handed, but he will have wonderful and unlooked for chances in ice and snow, and mist, and half-darkness; mallard flighting into the marsh and out to sea, mallard in a V swinging suddenly over his head, mallard strangely unperceiving, crossing the breakwater where he has waited without a shot for hours; wigeon flying low along the edge of the tide; curlew swinging out from over the cliff—I would not shoot them now, but it was different years ago—and even rare birds, there on the rim of the sea because of the frost. It was in a winter of hard frost that as a boy I shot an eider duck on the coast of Kent; and the sea coast waits still with such chances in such winters as that.

CHAPTER XIII.

HARES AND RABBITS

JACK hares, boxing on an April morning; a hare in her form, her ears pressed to her neck, and her body flat to the soil, hoping you will not see her; a hare jumping up before hounds and covering the ground like a deer; hares in hundreds on a wide plain, sitting, nibbling, cantering; hares swimming; a mother hare carrying her leveret in her mouth—until you have seen these you have not seen hares as they are. And yet to many men, I suppose, a hare remains merely a not very interesting animal which gets up in a turnip-field, or lollops out of a covert, is shot going at no great pace, and makes a useful addition to a bag of pheasants.

Or we think of hares as we see them in Scotland, thin, catlike creatures cantering down the sheep-runs in the heather. There are two species of hares, the common or brown hare, *Lepus europæus*, and the mountain or blue hare, *Lepus timidus*. The brown hare is the larger of the two; its average weight is eight pounds, but it may weigh ten pounds or more. The blue hare is slighter, more angular and less shapely; its average weight is nearer seven

than eight pounds, but you will see many leverets in August and September which weigh much less. In October the blue hare turns from blue-brown to blue-grey, and by December it is pure white. And there is a variety, or sub-species, of the blue hare, which belongs to Ireland, different in colouring in that the coat is inclined to drab or dull buff, and in winter turns, as a rule, only partially to white. But the blue and the Irish hare alike are more lightly built and less muscular in looks than the brown, and their fur is thinner and poorer in texture.

You may grant that a hare is not always beautiful. She is even ungainly when she moves slowly about a field (worse, a garden), for she is not built for slow movement ; there is something goat-like about her yellow eyes, which, as she passes or comes towards you, look strangely glassy, almost blind. But a hare moving at her fastest is the most lithe and lovely creature, so lovely that some men cannot bring themselves to bring such a vision of movement to an end—and those are the men, too, who most dislike shooting a hare when she is moving slowly, which is, of course, reducing hare-shooting to an absurdity. And a leveret—a leveret, say, three days old ? I do not know any more fascinating little animal. Its ears are broad and soft, its eyes are dark blue-grey, and it lies panting in your hand ; it even seems to try to squat there, as if it almost hoped that you do not see it.

Hares breed twice in the year, or may do so ;

I do not think it is proved that all, or even most, hares have two litters in a season. They are nothing like so prolific as rabbits, for they have no more than two, or three, or four leverets at a birth ; I have read of, but have not seen five. But where the conditions suit them, as in the Eastern counties and Salisbury Plain, they increase to very large numbers. Cobbett, in *Rural Rides*, writes of a farm on Salisbury Plain on which he saw "an acre of hares" ; I know the place, and if not an acre, you may certainly see a drove of hares on it. And it is in places such as this that hares must undoubtedly be shot down. Farmers often like hares, even when they dislike rabbits ; but droves of hares can be too much of a good thing.

On the Plain, and elsewhere where they are abundant, they drive hares ; it is the ordinary way of getting rid of them. But, unfortunately, they do not drive them fast ; a hare will only move fast when she is escaping, and she does not think she is escaping when she comes forward to a line of guns ; she hears the beaters behind her and she comes forward cautiously and timidly, not knowing what may be waiting in front. It is an interesting sight, though the shooting cannot be interesting ; all that you can do is to make it certain. Never take a long shot at a hare ; you may see hares killed a long way off—always by a broadside shot and no other—but far more often than not a long shot only wounds. If you shoot at a hare going away from you, aim at her ears, and if crossing

you, at her nose ; if coming towards you—but that is too murderously simple. Perhaps because these shots are simple they are often bungled ; and a wounded hare's cry is enough to send a man home for the day. Some men hate the shot so much that they will not risk it ; if they must, they must, but hares often pass them wildly congratulating themselves that the man is blind.

But you cannot be blind to rabbits. Rabbits insist that you must notice them. A hare makes itself a " form " ; it moulds the herbage, or the drills of the field, with its body, and lies there concealed ; but rabbits make burrows. They burrow into and spoil banks and fields and the floor of the wood ; they burrow under fences into gardens. They are hungrier than animals twice their size ; they foul where they feed ; they devour good green crops and leave dirty spaces behind them. They are as prolific as rats ; a rabbit begins to breed at the age of six months, may have six litters in a year, and five or six or seven young in each litter. So that a young doe born in January may well be a mother of half a dozen by August. But without allowing for young rabbits breeding the same year, a simple calculation shows that a pair of rabbits left to breed unchecked may produce thirty-six in a season, and that these thirty-six, counted as eighteen pairs, add six hundred and forty-eight the next year. *Delendus est cuniculus !* May his enemies flourish !

It is because of the damage the rabbit does to

crops, and the pace at which he breeds, that the Ground Game Act of 1880, which gives a tenant farmer the right to kill hares and rabbits on the land which he occupies, is recognised to-day as a piece of legislation as valuable as it was far-sighted. That was not the opinion held of it when it was passed, or even thirty, or, for that matter, twenty years ago. Few acts have been more bitterly cursed at birth ; few, I think, are more generally recognised as beneficent now that it has stood the test of time.

When the Ground Game Act first became law all that the shooting landlords and tenants saw was that their shooting would be partly spoiled. And so it was ; the immediate consequence was that there were fewer rabbits and hares. But what they did not see was that the Act took away from the farmer a grievance which, had it been allowed to grow, or even to continue, would not only have spoiled their shooting far more, but might even have ended it altogether. It was unthinkable that a tenant farmer could be expected to go on year after year trying to farm his land in a scientific manner, trying his best to get the best out of the soil, and then year after year seeing his efforts made useless by rabbits, which were to be allowed to go on breeding simply that someone else might have the amusement of shooting them. Of course, the thing was impossible. It is true that the farmer could claim damages from the sporting landlord, but even if he got them he could not get the satisfaction of harvesting good crops. The only logical thing

to do, therefore, was to give him the right to kill down the rabbits for himself, and if he did not do so, well, it was his own fault.

And in time it became plain that the shooting was not really spoiled after all. Partridge shooting became better, because rabbits and partridges do not flourish on the same ground. If you have rabbits in your hedge banks, you have holes; if you have holes you have stoats, rats and weasels; and if you have those, you lose your partridges. No gamekeeper on a partridge beat wants rabbits. And though nobody denies that the rabbit is a sporting little beast, and that he adds variety and amusement to a day's covert-shooting, and is not always hit every time by even the best of shots, most people to-day recognise, I think, that a rabbit shoot should properly be a thing apart. It should be a shoot along some hillside or other piece of ground where the rabbits will not destroy crops. In Scotland, on the edge of the moors, there are plenty of such natural rabbit warrens, which make excellent shooting for an hour or two; and in England rabbit shoots can be planned and laid out, and the ground parcelled off, as easily as for any other purpose.

Grant, then, that rabbits may be sporting little animals, but that they must be kept down in the interests of the farmer, how are we, or how is he, to set about it? There is no question more commonly or more often asked, I suppose, in the country. And there are many answers. Rabbits can be snared, trapped, netted, ferreted

and shot, stunk out and shot, hunted by beagles and shot, even gassed in their holes. Since this is a book on shooting, we need not trouble about the gassing, which is mere destruction, except to note that it can be a very efficient process when the bury is of a kind in which you can be sure of getting the gas into the galleries; and as to snaring and trapping, all that need be said is that snaring is a skilled job which needs some learning—it isn't everybody who can see a rabbit's "jumps" in the grass at a glance—and that trapping with steel gins is a horribly cruel business which no one will touch unless he is absolutely obliged.

But as to shooting? Ferreting, of course, is the old and simple way, and, indeed, could anything be simpler? Put a ferret into a hole and out comes a rabbit—what could be more successful? There is more in it, unfortunately, than this.

In the first place, you want good ferrets, and they are not always easy to get. A ferret that is gentle, quiet, blood-thirsty, fast, painstaking and untiring, and which will not get into a hole and go to sleep or remain there doing nothing—such a ferret is a treasure, and should be bred from with another of the same kind, for you cannot have too many sons and daughters, especially daughters, from such parents. Personally, I always prefer jill ferrets (by the way, it is equally correct to speak of dog and bitch ferrets, or buck and doe, or jack and jill), and I like working with a mother and daughter; I

think they understand one another better than non-related ferrets. You can keep the old jack for the line, when the jills have killed underground and you want to find them. He is useful then, for being bigger and stronger he will drive them off.

But a word, first, about keeping ferrets clean. There is nothing more disgusting than a filthy ferret-hutch, and there is nothing more cruel to a ferret than to keep it in dirty surroundings, for it is naturally a clean animal like a cat. Give it as big a hutch as you can, with sweet hay for its bed, and feed it, so far as you possibly can, with its natural food, which is raw meat. Many people feed ferrets only on bread and milk, but would they think of giving only that to any other carnivorous animal ? It is no more natural for a ferret to go without meat than it is for a lion. It is one of the reasons why ferrets' cages are often so filthy, that milk acts as an aperient with ferrets. They want mice, sparrows, chickens' heads, rabbit—in fact, what they would naturally hunt.

Now for using them. You are going out for a morning's ferreting, and you have in view, perhaps, a number of hedgerows bordering on a field, one or two smaller buries in a bank, and a large bury in the woods. The first thing to be able to do is to know whether it is worth while to put a ferret into this or that hole or bury ; whether, in fact, there are likely to be rabbits in it. You will learn to judge this by looking for newly scratched out earth, droppings, the sides

of a hole worn smooth, and above all, for places where rabbits sit outside a hole, which are flat and shiny. Only practice will help you to estimate the value of these different traces—the "trade," as the gamekeepers call it, of rabbits in the hedgerows. But certain points will come home to you very quickly. A spider's web spun across a hole, for example, tells its own story; so does a drift of clean, untrampled leaves. If the bury lies low and there has been rain, so that the lower part of the hole fills with water, you will not find rabbits; and on a day of high, cold winds it may be useless to ferret a hedgerow, for rabbits like to keep warm and hate a draught.

Next, as to bolting them. You may know that there are rabbits in a particular bury and they may refuse to bolt. There is nothing to be done about it; you can only wait. Sometimes by putting in two ferrets you may get a rabbit to bolt when one ferret cannot move him; sometimes, on the other hand, the rabbit seems to get hopelessly confused, and instead of bolting, allows the ferrets to catch him; then you will have to dig him out. One rule, perhaps, you may accept. A full-fed rabbit is sleepy and disinclined for exertion; so that if you have chosen a morning when the rabbits have been feeding all night before, in fine moonlight, for instance, they will not bolt well. On the other hand, it is certainly not true that they will always bolt well when they are hungry, for I have had some of the dullest possible mornings after nights when it has been raining, and when the rabbits, you

would suppose, must certainly have stayed at home—for the little beast hates getting his jacket wet. Another general rule is that rabbits bolt better in the morning than the afternoon ; but that is not universally true. I have sometimes found it exactly the opposite, and have wondered whether the fact was that the rabbits had had time to get over their sleepiness after a heavy meal.

One golden rule in any case, stands. Do not make a noise. Do not talk loudly to your companion, and do not stamp about the bury which you mean to ferret. You will have to go up to it, of course, to put in your ferret, but do that quietly. The thing is obvious. What is the rabbit's danger-signal ? He stamps hard on the ground with his hind feet. Well, if you stamp instead, it comes to the same thing. He knows you are there ; why should he come out ? Yet many gamekeepers, and all keepers' boys, go about a rabbit-bury as if the ideal thing to do would be to drive cart-horses over it.

Accessories of ferreting are few. You want a good big bag, or a small sack, with a running string round the mouth, in which to carry your ferrets ; put two or three handfuls of hay in it for them to lie in. Some people forget that ferrets are delicate animals and need to be kept warm, and they take them out on a winter day in an empty bag—about as comfortable as a mattress without blankets. Next, you want a collar and line. Fit your collar to the ferret which you keep for line work, and fasten to the

collar a dozen yards of stout cotton line, which you can keep on the kind of winder you have for sea-fishing tackle. At intervals of a yard from the collar tie knots in the line; this will enable you to tell how far in the line ferret goes. You will also want a spade, in case you have to dig a rabbit out. Keepers have a particular kind for ferreting, long and narrow, which is called a graft.

And when to use the line ferret? Let us hope, on any morning when you go ferreting, that you will not have to use him. All rabbits on that morning shall bolt from their holes as if the devil were after them. But there may, some unlucky day, come a period of depression. The ferrets have been put into a likely bury and nothing happens. No rabbit bolts; no ferret shows its nose; you stand and shiver in an east wind, and yet you cannot put down your gun or relax your attention, for at any moment there might be the sudden rattle and the suddenly racing body, and you would lose your chance. But the keeper, after a while, shakes his head. Cautiously he walks to the bury, quietly he stoops. He lays his ear to this hole and to that. At last he looks up and glances keenly about him. He can hear them below ground. They have caught the rabbit there, about six feet away from the spot where he has been listening. But how far down? And are they stationary or moving?

Quietly he steps back to the bag with the line ferret in it. He puts on the collar, strokes the

big jack as he carries him to the hole where he heard the sound, places him in the hole and watches the line travel after the jack. In it goes as he unwinds it ; you watch the knots and count the distance. It stops, goes on again, stops. The jack has come up to the rabbit and probably has driven the jills off. That is the place ; two knots have disappeared. Without a word he takes off his coat and picks up the graft. Let us hope there are no roots.

Some people like a dog with them for ferreting. Well, if you are dealing with a bury in a wood, a retriever which will wait at heel and watch rabbit after rabbit bolting, and will only move when a motion of the arm sends him after a wounded rabbit that looks like getting away among the trees, is a valuable companion and assistant. But even he can be in the way, as when, for instance, two rabbits bolt almost at the same moment, and you cannot fire at the second because you have sent him after the first. In ferreting a bury in a hedgerow, or in the open, a dog is unnecessary, and only gives you something extra to think about.

And that brings us to an essential point. Ferreting is best for one gun only. Two guns get in each other's way ; either they hesitate, each waiting for the other to fire, or they both fire, both hit, and so waste cartridges without either having the satisfaction of knowing that he killed the rabbit. The exception to the rule is when you are ferreting a hedgerow with a high bank, and when the rabbits may bolt on

either side. One gun cannot then deal with all the rabbits. But in such a case you must be very sure of your other gun. You must know exactly where he is, and he must be equally certain about you. You must stand exactly opposite each other, and never fire at a rabbit unless he is absolutely clear away to the side; above all, you must be careful, too, where your gun is pointing; it makes it none the safer that you have a hedge between you.

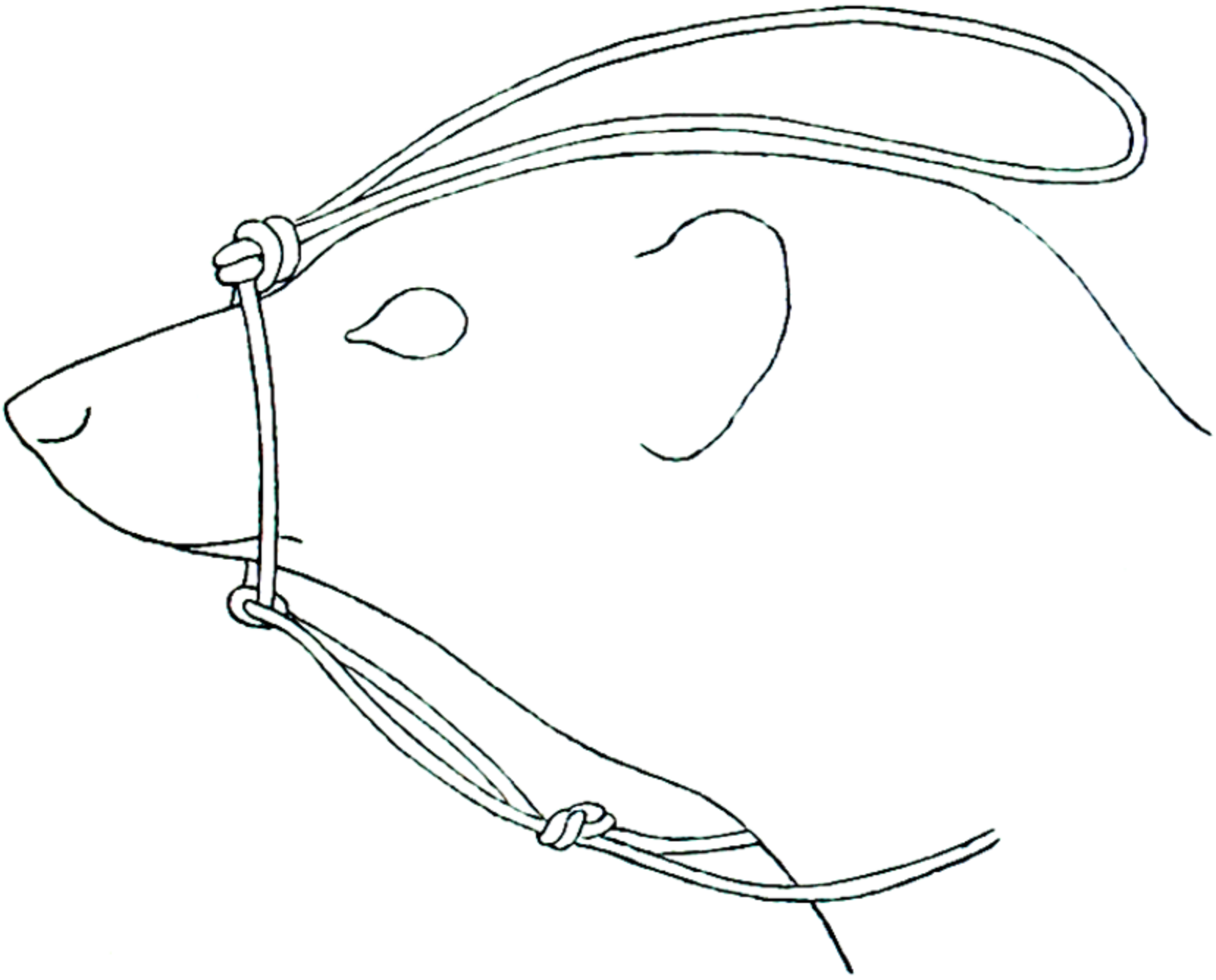
Remember other points, for safety's sake. If a rabbit looks out of a hole or sits in the mouth of a hole, do not fire; the ferret may be close behind him. If you are using two ferrets, and a rabbit bolts, be sure that the other ferret is not in the line of fire. And (I have mentioned this before, but it will bear repetition) if you leave your place to go up to the bury—as, for instance, when a ferret lies up—always unload your gun. You can take it with you, for you may not be able to lay it down or stand it conveniently—when you are in snow, for example—but never think it enough only to put it at "safe"; always unload.

Ferreting is a winter job, and when there are buries in the coverts where there are also pheasants, the keeper will defer dealing with them until February, taking the hedgerows and the outlying buries first—possibly quite early in the autumn if there are farm crops likely to be damaged. It may even be necessary to ferret buries in the summer, and in that case, since there will be young rabbits about, you will have

to muzzle the ferret, or it will run into the litter and lie up. It is useful to know how to tie a muzzle with a piece of string. Take a foot or so of ordinary twine, measure the distance between the bridge of the ferret's nose and his neck close behind his ears, and make a loop in the middle of the string of that length. Place the knot on the bridge of the ferret's nose, part the ends and tie them under his chin, take them back together and knot them under his throat, then part them again, bring them up on each side of his neck behind the ears, and tie them to the loop. (See the drawing.) Mind that the string does not press too tightly on his jaws, and that he has plenty of room to breathe ; otherwise the muzzle must fit fairly close, or it will slip off.

Wherever there are buries in the neighbourhood of farm fields, ferreting is a necessity, and can sometimes only be regarded as a duty rather than a form of sport. But for a day's shooting, whether it is a rabbit-shoot only, or covert-shooting with rabbits as a side-show, they should be "laid out." For this purpose you get a quantity of some stinking mixture such as renardine, dip rags in it, and place rags in the holes of all buries. (Or instead of rags, use old cartridge cases ; they are easy to handle and you can dip them and poke them down with a thin stick.) Do this thoroughly by day and hope for a dry night. If you get a dry night the rabbits will leave the buries, or rather will come out to feed, and will not go back, hating the smell ; then in the morning you go round and fill in the buries.

If you have bad luck and the night is wet, the rabbits may not leave their holes, and your work will be wasted : so that it is as well to begin your work two or three days before the shoot, so as to get the chance of at least one dry night. Then, with a little more luck, you will get a dry day



How to muzzle a ferret with string. In actual practice the knots would lie close against the ferret's nose and chin.

on which the beaters, or the spaniels working with them, will find them squatting under every available scrap of cover.

And so they come bolting across the ride or out into the open, and you are grateful for your practice at them when ferreting. If you have done well with them when ferreting you will do

better with them in the open. In shooting them, think only of the head; there is no question of aiming, as there must be with a high pheasant: you swing your gun at them, thinking only of the head, and, shot through the head, the rabbit turns somersaults.

CHAPTER XIV.

"VARIOUS"

A GOOD mixed bag gives many men more pleasure than a big day with only two or three entries to be made in the columns of the game book. "Various" is the column which they like to see well filled. And you will find that, in practice, although it looks as if it would be easy to get more, you will seldom have more than ten species to record. If it is early in the season you will not get pheasants or partridges, and when you begin to shoot pheasants, you are more likely than not to be in England than Scotland, and so not to be within reach of grouse.

But Scotland is the place for mixed bags, and there is one item in the list which you are unlikely to get anywhere else, and that is roe. There are, of course, wild roe-deer in England, and not only in places like the New Forest. I have seen wild roe in Surrey. And roe-deer, incidentally, do not fit very well with the title of this book, for if there is one single and elementary idea in my head in regard to roe, it is that I do not want to shoot them. I think they are the most beautiful of all wild animals. But there

can be no question that they are most mischievous. The succulent leaders of young forest trees are a favourite food with them; they do very well, too, feeding on farmers' crops, and so in many places in Scotland in the winter they are systematically driven and shot. To the man who prefers stalking roe to stalking red deer, or who thinks that roe ought only to be stalked, this is a lamentable matter, for when they are killed in January the bucks have shed their horns, and so the heads are valueless. And to the ordinary man, too, it must seem a barbarous thing to pour a charge of shot into so lovely and defenceless a creature; but many of the guns who take part in these January drives are farmers, invited especially for roe and rabbits, and to them the two serve but one purpose.

Unlike the red deer, the roe buck, as a rule, has but one wife. He gets a bright chestnut-red coat in May, and soon afterwards begins his courtship. The actual rut or mating takes place at the end of July, and after that the buck goes alone for a month or two, and rejoins the doe in the autumn. At the end of November he sheds his horns, and his coat by that time has darkened to brownish-grey. His horns are grown again by February, and the fawns are born in May. Like other deer, the mother is brave in defending her little ones, and clever in getting them to hide; but the prettiest thing about roe—I have never had the luck to witness it myself—is the habit it has of running rings round trees, in and out in the shape of a figure of eight, it may be;

sometimes the buck runs after the doe, sometimes the mother plays in this way with her fawn. If I could see that, the roe might eat my young trees to the stem for all I should care.

Another "various" item in the game-book belongs to Scotland rather than England—the golden plover. Of course, you may see golden plover in England, on the moorlands of the north and Dartmoor and Exmoor. But, I suppose, most of the entries of golden plover in the game books belong to Scottish grouse moors, and many of them, unfortunately, to August, when the bird is not worth shooting. For the golden plover is, indeed, not one, but three birds. If you come across him in the breeding season, say, March to May, you will find a beautiful bird with glossy black cheeks and breast, walking daintily over rough grass-land or flying with its mate in an airy dance of courtship. Late in the summer this plumage changes to brown speckled with dull yellow, and you will see ahead of you on the moor a bird flitting tamely from stone to stone, and uttering from time to time a clear musical whistle. Indeed, it is the whistle which will first draw your attention, and when you come up to the confiding bird, I hope you will think it a pity to shoot it. You will not know it for the same creature if you see it next in autumn or winter. Instead of going alone or in threes and fours, it will have joined a flock, and the flock will fly and wheel and swerve zigzag high in the air—a wonderful sight in a blue sky.

The golden plover nests, like the green plover,

in a hollow on the ground, lined with a few bents of grass or heather. It is a smaller bird than the green, but lays a larger and handsomer egg; and there is a strong contrast, too, in the flight of the two birds. The golden plover's flight is swift and strong, while the green plover wheels and tumbles, or if it is flying from point to point it offers a slow and poor mark. For that reason, and because the bird is not a table delicacy as the golden plover is supposed to be, I know no reason why it should find a place in the game bag at all; but, of course, it often does so. A very urgent reason, on the other hand, should keep it safe from the gun; it feeds largely on wire-worms and other insects, and so is one of the farmer's best friends. But that does not protect its eggs, which find their way in thousands to the London poulterers in spring, to be sold for the dinner tables of *gourmets*, or *gourmands*, perhaps. Not all the eggs, by the way, which are sold as plovers' in the spring are really plovers'. In the baskets for sale in Leadenhall Market, I have seen rooks' eggs and black-headed gulls'.

And before we leave the moor there is the curlew. The old rhyme of the curlew that "be he lean or be he fat he carries a shilling on his back," may or may not be true to-day, I do not know: I know that you will occasionally see men selling curlews in London streets, and they certainly ask more than a shilling: I have often wondered why they sell only curlews, and who buys them. I have shot curlews for food in

Ireland, but I would not willingly shoot another. For when once you have come to miss the call of the curlew, when once you have gone for years together without hearing it, and have come to think of it as the true voice of the moor in spring, the cry that comes in the wind over streams where grey wagtails nest and little trout leap in the foam, you will never think of it as a bird to be shot in the autumn. It is a bird, rather, to be found nesting, and its big olive-green eggs, spotted with brown are among the handsomest of all British birds'.

I am writing (you will say) of birds which should not be shot rather than those that should? Perhaps; but most of us who shoot to-day think more than our predecessors thought about the place that birds should properly hold in relation to sport: I mean, it seems natural that grouse and partridges should be shot, since they are excellent for food, there are plenty of them, and shooting is the proper method of hunting them. But we do not need curlew for food, and we do value a curlew for the distinction of his form and the music of his cry: and the value of the bird among the sights and sounds of the moor is so great—or so it seems to me—that he is altogether out of place in the game larder or on the sideboard.

Two other birds which rightly belong to the "various" column are becoming less and less likely, as the years go on, to be seen in it. One is the quail, which a hundred years ago used to be moderately common in the southern counties,

though not really abundant. Hawker, for instance, in his *Diaries*, records that in the seasons 1802–1853 he shot fifty-eight quail ; he never got more than seven in a season, and sometimes got none ; whereas in the same period he shot 7,035 partridges. But there is an easily discovered reason for the decrease of quail. Quail are migratory birds, which come from Africa to Europe—or try to come—for the breeding season. All along the coast of the Mediterranean they are netted by the hundred thousand for the markets of England, Belgium, and Italy—not, to her honour be it said, France—and so long as Londoners kill and eat birds in the nesting-season, when by the laws of God and man they ought to be left in peace, so long will quails fail to return to a country which offers them such strange hospitality.

But it may still be your fortune to find a stray quail's nest. I have myself found young quail in Sussex hardly able to fly ; and every year there are fresh records of quail occurring in this and that English county. And, if by some rare chance, quail should rise before the guns in a day's partridge shooting, remember that it is not a covey of quail but a bevy. That is a word which, I suppose, may be likely to fade out of the language for want of use : I daresay one might count on the fingers of two hands the men who have fired at a bevy of quail in English fields.

It is not very different with the landrail, which years ago was a fairly common bird. It is

certainly not common now, or only in a few localities. I should be doubtful of finding one now in the fields where I used to hear them, in Hertfordshire and Berkshire and Sussex ; I think I shall be certain of hearing them only in the Hampshire water meadows. For modern methods of farming are against the landrail. He used to be called the corn-crake, and, as a writer in the *Times* pointed out not long ago, he crakes in the corn no longer. We sow our corn in a different way from the way he was once used to, and it does not suit him. We used to sow it broadcast, and he could run and hide where he pleased ; now we sow it in drills, and he does not like the regular, open colonnades. And he cannot make up for his lost nesting places in the corn by nesting in the grass fields. We cut our hay early, and cut out his nest. His only refuge is on the edge of cultivation, or in fields partly cultivated. The water-meadows suit him, and there, perhaps, he has found his last refuge. If those ever go, he too, probably, will go with them, to join our other banished birds, the bustard and the bittern.

When a landrail does get up—out of a field of mustard, perhaps, or clover—he offers a curious problem of flight for us to guess at. He flits weakly forward, he drops into the crop again, and if you come up with him and try to get him on his wings again, either you will fail altogether or he will get up exhausted a few yards away. What is the reason ? Why is it so hopeless a weakling ? For it is a migrant. Each year when it comes to us in the spring it has flown thousands

of miles; each year when it leaves us in the autumn it flies thousands of miles; and though you may flush a landrail in a Sussex field in the first week in September, and find it apparently unable to do more than fly straight and slow for fifty yards or so, within the week it may have made a single flight over the Channel and, perhaps, for hundreds of miles the other side. For the Channel is by no means its longest over-sea journey. Every spring it arrives in Iceland, which is five hundred miles from Scotland, and three hundred miles from the nearest land, the Faröe Islands; and its range of migration is from Norway to Cape Colony.

What is the answer to the riddle? Is it possible that it may be something perfectly simple—in short, just fright? The landrail is a very shy, nervous bird, and if it is suddenly surprised by a man or a dog, may it not, perhaps, be almost paralysed by fear, and so unable to make use of its muscles—just as a rabbit cannot run when terrified by a stoat, or as a nervous bowler cannot control his finger muscles when he is being hit? There is corroborative evidence, in the case of the landrail, for this loss of muscle control. For there are many instances on record of landrail "shamming dead"; that is, of live, uninjured landrails, when handled, becoming perfectly limp and motionless, but when left alone suddenly recovering themselves and running or flying away.

On the other hand, other birds offer the same kind of riddles of prolonged flight at one time

and inability to do more than flutter at another. We have already met the golden plover : you would not think that the bird which flits so slowly in August would be cutting magnificent arcs in the wind of October. And the jack snipe, flying like a moth over the bog in autumn, swoops and swings at a great height and a great pace over its nest in the Arctic April. These are problems which still wait for solution.

Two other birds, commoner than the landrail, find their way occasionally into the " various " column. One, the coot, is a fairly fast flier, and not an unworthy mark for the gun ; the other, the moorhen, flaps feebly along the surface, hardly able to lift itself into the air. Nor does either, like the landrail, recommend itself for the table. Both, I believe, are eaten ; coots, I have been assured, have not a very oily or fishy taste, and in the Fens they make moorhens into watercock-pie. But we, probably, shall not be so hungry. We may be asked by the gamekeeper, for all that, to shoot both moorhens and coots ; for moorhens have savage beaks with which they kill wild ducklings. So that it becomes a matter of choice ; but for myself, I have never wished to add either bird to a mixed bag ; I prefer the coot's screwy wood calls in the reeds and rushes, and the moorhen's nervous paddling, the flicker of her tail, and the way she walks on the leaves of the water-lilies.

CHAPTER XV.

"VERMIN," AND THE BALANCE OF WILD LIFE

AND the end of that last chapter brings me to an aspect of shooting which has been more seriously studied during the last twenty years, and which will be more and more studied as years go on. Which is better, we asked—to lose the beauty of the moorhen or to lose a few young wild duck? Which is better—to put the question more widely—to have plenty of game in our fields and woods and on our open moors, but to have only game and none of the enemies of game? The gamekeeper, perhaps—though not every gamekeeper—would answer that question one way and the naturalist another. The sportsman comes between, leaning to-day a little more to the naturalist's view than he used. What is his answer?

I am not going fully into the question of the so-called guilt or innocence of all so-called vermin in this chapter; to do that would be merely to re-write what I have written elsewhere.* But let us look at the thing on broad lines, and realise at the outset that if you intend

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* *Shooting Days*, p. 170.

to destroy, as vermin, all the enemies of game, you are deciding to get rid of some thirty species of birds and beasts, some of them the most interesting and beautiful of our native species. Let us see what this means.

Not all the enemies of game are beautiful or useful, it must be admitted, and some certainly do deserve the name of vermin. There is the rat, for instance. There is nothing good to be said about the rat. He is dirty, mischievous, greedy, a destroyer, a plague-carrier; he is also immensely prolific and supremely difficult to destroy or dislodge; and it is practically certain that if the world could be rid of rats, it would be a better and cleaner place to live in. So that we can decide against the rat straight away; he is the enemy not only of game, but of the human race, and the gamekeeper, when he traps rats, is the friend not only of the sportsman but of the farmer, the villager, and every member of the community.

But when you come to other animals which the gamekeeper, perhaps, would set side by side with rats on his list, you are on different ground. Stoats and weasels are savage beasts of prey, and destroy every year innumerable grouse, pheasants, partridges, besides rabbits. But they are also beautiful, lithe, active creatures, whose movements are a delight to see; and they may even be claimed to be useful, in that they devour rats and mice. We could not afford to lose them from among our native species; and when you come to their larger relatives, the polecat and

the pine marten, you are met with a problem not of destruction, but of preservation, for both are nearly extinct.

Or take another group of creatures—the hawks. The sparrow-hawk, to begin with, is an undoubted enemy of game. A pair of sparrow-hawks would clear a rearing-field of pheasants, and no keeper could tolerate them in its neighbourhood. The kestrel, in the same way, although his main food is mice, and so any damage he does to the gamekeeper is far outweighed by the money he gives back to the farmer, has no particular regard for persons, and if he sees a small partridge or pheasant running about in the field below him, he does not refuse an easy meal. Why should he? The buzzard, again, is not a hawk that swoops at his prey like the kestrel or the sparrow-hawk, for he is a slow flier, but he likes young rabbits and gets a stray grouse now and then. The peregrine feeds full on grouse or pigeons or wild duck or, indeed, any bird it pleases; and if a grouse moor were quartered through the year by peregrines, it would become a moor without grouse. But think of the beauty of these hawks! Think of the others, too, which are rarer, the merlin and the hobby, and the marsh harrier and the hen harrier (they call it the chicken hawk in Ireland, which is evidence of its character); or of the kite, which, if egg-collectors had their way, would be as dead as the dodo; or of the osprey, which drives its talons into salmon and trout; or, last and greatest of all, of the golden eagle, which

you may see soaring in circles in the blue above Scottish mountains, and which spoils every grouse drive within sight of it. To some gamekeepers all hawks are alike, and the golden eagle is worse than them all; but would any naturalist lose the sight of a kestrel hovering in the wind, or a peregrine stooping at a pigeon, or the eagle over the forest? Eagles, it is true, are actually encouraged on deer forests; they keep down the grouse, which spoil the stalking.

Owls to-day are nearly safe. Only the ignorant among gamekeepers shoot our British owls. They are beautiful as well as useful; the white owl sailing silently down the hedgerows at dusk (you may see him sometimes hunting by day, too, when food is scarce) is the most graceful and ghostly sight of the dark, just as the hoot of the brown owl is the most melodious sound; and all the owls, white, brown, long-eared, and short-eared (he is sometimes called the woodcock owl, because he is a winter visitor who comes to us about the same time as the woodcock)—all of them catch mice, and so deserve to be protected. The exception among owls is the little owl, *Athene noctua*. Not only does this owl take young pheasants and young chickens from beside the coops, but it feeds, too, on any and all of our singing birds, from blackbirds to nightingales. Also it hunts by day, by dusk and by night. I know that it also eats beetles and worms, and if it confined itself to an occasional pheasant I should not object to it so much; nor should I object to it at all if it were a British

bird. But it is not; it was introduced into this country in the 'eighties and 'nineties from Holland by Lord Lilford, in the hope of ridding church steeples from bats, and by other enthusiastic people for no particular reason except that they were not able to see the value of keeping our native fauna separate and distinct; and as a foreigner and an invader, no Englishman, quite properly, can abide him. He makes a hundred foreign noises; he squeals, squeaks, squawks, mews, yelps; and he gulps down English singing birds. That is the foreign bird's unforgivable crime.

When we come to another group we find fewer distinctions. Of the *Corvidæ* generally, we may say that the whole question is one of numbers. Which could we do without? The carrion crow no doubt would be little missed by the gamekeeper, for he is as unremitting as he is intelligent in his search for eggs and chicks of any kind in the field or the farm; but there is an attraction, too, in the purposeful savagery of the bird and the sinister carriage of his lean, gaunt figure. He helps, too, to emphasise the straightforward homeliness of the rook; his snarling "krar, krar," contrasts with the rook's honest caw. Next to him, for the damage he does and the dinner he eats, shall we put the hooded crow —the "hoodie" hated by the keeper of the grouse-moor, and the sheep-farmer with weakling lambs? But he, too, belongs to the desolate spirit of northern mountains; he and the raven, the chief of his tribe. The raven, of course, is

already rare, while the hoodie is not; but if the hoodie were coming near to extermination, would not the hills be the poorer for the absence of a great bird?

About these three there can be no argument; they are unquestionably enemies of game, and the gamekeeper rightly quarrels with them. And so, too, with the jay and the magpie. The jay is in one way the keeper's friend, for he will tell him with his sharp bark, if there should be a trespasser going through the wood, and if the keeper has had to leave a ferret that has laid up in the bank, the jay will let him know when it comes out of the bury. But both jays and magpies are hungry for eggs and chicks, and though I think it is more accident than design when they begin with young pheasants, if either of them does begin there can be but one end—either that of the pheasants or the jay. For myself, my main quarrel with the jay is that, like the little owl, he is the most cunning butcher of small birds. Yet both he and the magpie are gay and handsome fellows, and if they are highwaymen, they have still the highwayman's graces.

With the other two, the rook and the jackdaw, the keeper may quarrel or he may not. It is pretty well established by now that the habits of the rook vary with his opportunities. In some localities—those, probably, where his numbers are comparatively small and his natural food supplies large—he does not cross the game preserver's path from one year's end to another.

In others—those, perhaps, in which through hard weather or hard soil he has been unable to get at the food he wants—he has taken to a diet of eggs and grain, and the rookery is no longer admired. Yet how black must be his crime, and how clearly proved, if the rookery is to be condemned. Many of us, living in the country, would give much for a rookery of our own, knowing that it is just one of those things that men cannot make or money buy. Rooks building in March, rooks in blue sky over the thin-topped elms of May, rooks cawing and young rooks gobbling—when we hear those sounds of England we forget about shooting.

Though, to be sure, rooks are shot. They are shot regularly in many places in order to keep their numbers within bounds, and if that has to be done, the way to do it, doubtless, is with a rook-rifle. There is nothing of sport in the business, though it needs some skill in a wind; the young rooks sit about in the branches near the nests, and if the trees are high and the branches swinging you will not get your mark every time. Otherwise, with low trees and no wind, it is mere murder. The thing has to be done, very likely; but it may as well be done by someone else.

As to the larger quadrupeds, there need be no argument. Wild cats are so scarce to-day that most owners of forests, I suppose, would ask for the chance of seeing one alive. Foxes are wanted for hunting in most parts of England, and in most parts of Scotland are not wanted at all.

A dozen brace of grouse in the year is the Highland keeper's calculation for the fox, and he makes sure of the life of his dozen as soon as he can. As for the badger, he is omnivorous, and does not object to a nest of pheasant's eggs if he runs across it, but I think it has never been proved that he looks for it, and with his strangely individual habits, his clever brain, and his close connection with prehistoric forms of animal life, he is perhaps, the most interesting of all British mammals. Last comes the hedgehog, on which the practical keeper sets his boot. It is a pity, for the hedgehog is merely a jolly little animal which has the capacity for getting in the wrong place. He, like the badger, is allied to extinct forms, he is the only British representative of his kind, and he has the truly British virtue of being unafraid of human beings ; but he has also a nose for a nest of eggs, and an appetite when he finds them.

And so, what is to be said on the whole question ? We have had a very good illustration, I think, of what ought and ought not to be done, supplied to us by the war. During the war, when the gamekeepers were in France, many shootings were allowed to go to pieces. No game was preserved ; there was no shooting ; no " vermin " were trapped or killed. The result was that the balance of wild life was upset and changed. In parts of England the woods swarmed with jays ; the numbers of the smaller wild birds decreased accordingly, and the final impetus was given to the increase of oak-leaf eating

caterpillars which began with the institution of sparrow-clubs years before. In Scotland, particularly in the more mountainous parts, foxes, hooded crows, peregrines, and buzzards increased out of all due proportion, and in Argyllshire, particularly, which is intersected by long arms of sea, black-backed and other gulls took to ranging the moors, with the result that grouse almost vanished. This was to no one's benefit, not even the survivors'. The birds and beasts of prey had taken charge, and soon there would have been nothing to prey on, but each other. It was evident that we had somehow arrived, before the war, at a better balance of life ; when the grouse, the rightful population of the heather, were there in numbers, and the birds and beasts of prey, though few in comparison, were rare enough to be interesting, and not so scarce as to be near extinction.

And that, surely, should be the point to aim at. If shooting is to be carried on at all, either on a moor or in a field or covert, obviously there must be something to shoot, and logically the shooting should be made as good as it can be. It cannot be as good as possible if birds and beasts of prey do the work of the shooter ; but, on the other hand, he must not, for his own sport, spoil the world for his neighbours, as he would if he destroyed anything in it that could not be replaced. We have reached, I believe, a pretty fair balance of wild life as things go : the opinion of the great majority of shooting men is in favour of all the rarer forms of wild life, even

when they conflict with the interests of actual shooting; and the gamekeeper, by keeping the balance as it is to-day, is the friend not only of the sportsman but the naturalist. Those who object, without distinction, to the destruction of any form of bird life, are as illogical as they are short-sighted; for if anything is certain it is that by keeping down the numbers of certain birds, such as jays, the numbers of smaller birds are largely increased; and so it comes that through the sport of shooting the countryside is the richer not only by valuable assistants to agriculture, but by much beauty, of sight and sound, and of form and song.

CHAPTER XVI.

SOME RECORDS OF BAGS

IT may be of interest to add a note of a few shooting records. Those who want full information should go to Mr. Hugh Gladstone's book, *Record Bags and Shooting Records*, which deals with the subject as a whole. The following are merely some of the figures which come up most frequently in conversation, which it is pleasant to be able to carry in the head, and to which it may be useful to refer :

GROUSE DRIVING

ENGLAND :

Date.	*Moor.*	*Bag.*	*Guns.*
Aug. 12, 1915	Littledale and Abbeystead (Lancs)	2929	8
Aug. 27, 1913	Broomhead (Yorks)	2843	9
Aug. 24, 1904	,, ,,	2748	9
Aug. 30, 1893	,, ,,	2648	9
Aug. 30, 1888	Blubberhouses (Yorks)	1070	Lord Walsingham
SCOTLAND :			
Aug. 30, 1911	Roan Fell (Dumfries)	2523	8
WALES :			
Aug. 18, 1904	Ruabon Mountain (Denbigh)	1562	8

PTARMIGAN

Date.	*Moor.*	*Bag.*	*Gun.*
Aug. 25. 1866	Achnashellac (Rossshire)	122	Hon Geoffrey Hill

PARTRIDGES

	Date.	*Beat.*	*Bag.*	*Guns.*
ENGLAND :				
	Nov. 7, 1905	Warham, Holkham (Norfolk)	1671	8
	Oct. 10, 1906	Berry Hill (Notts)	1504	8
	October,1906	Welbeck Abbey (Notts)	1467	8

WOODCOCK

IRELAND :				
	Jan. 28, 1910	Ballykine (Co. Galway)	228	6
	Christmas, 1802	Donaweale(Co.Cavan)	102	Lord Clermont
ENGLAND :				
	Dec. 21, 1910	Lanarth (Cornwall)	106	7
	December, 1872	Swanton Wood (Norfolk)	105	–

SNIPE

SCOTLAND :				
	Oct. 29, 1906	Tiree, Inner Hebrides	249	Lord Elphinstone and Mr. J. D Cobbold
	Jan. 30, 1915	,, ,, ,,	151	Mr. J. D. Cobbold
IRELAND :				
	Jan. 28, 1867	Dingle (Co. Kerry)	105	Hon. E. de Moleyns
	Dec. 11, 1871	,, ,,	102	Col. J. Peyton

WOODPIGEON

	Place.		
IRELAND :			
Dec. 1, 1911	Abbeyleix (Queens Co)	467	Mr. Cecil Fitzherbert
Dec. 14, 1911	,, ,,	351	Mr. Arnold Fitzherbert
ENGLAND :			
Dec. 5, 1913	Eynsham Hall (Oxon)	373	Mr. J. F. Mason

HARES

Dec. 19, 1877	Holkham (Norfolk)	1215	(Not recorded)

RABBITS

Oct. 17, 1898	Blenheim (Oxon)	6943	5

The question is sometimes asked, What is the record bag of pheasants killed in one day ? But reflection will show that, since the number is limited only by the amount of money spent in rearing them, such a " record " would have no sporting value.

THE END

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